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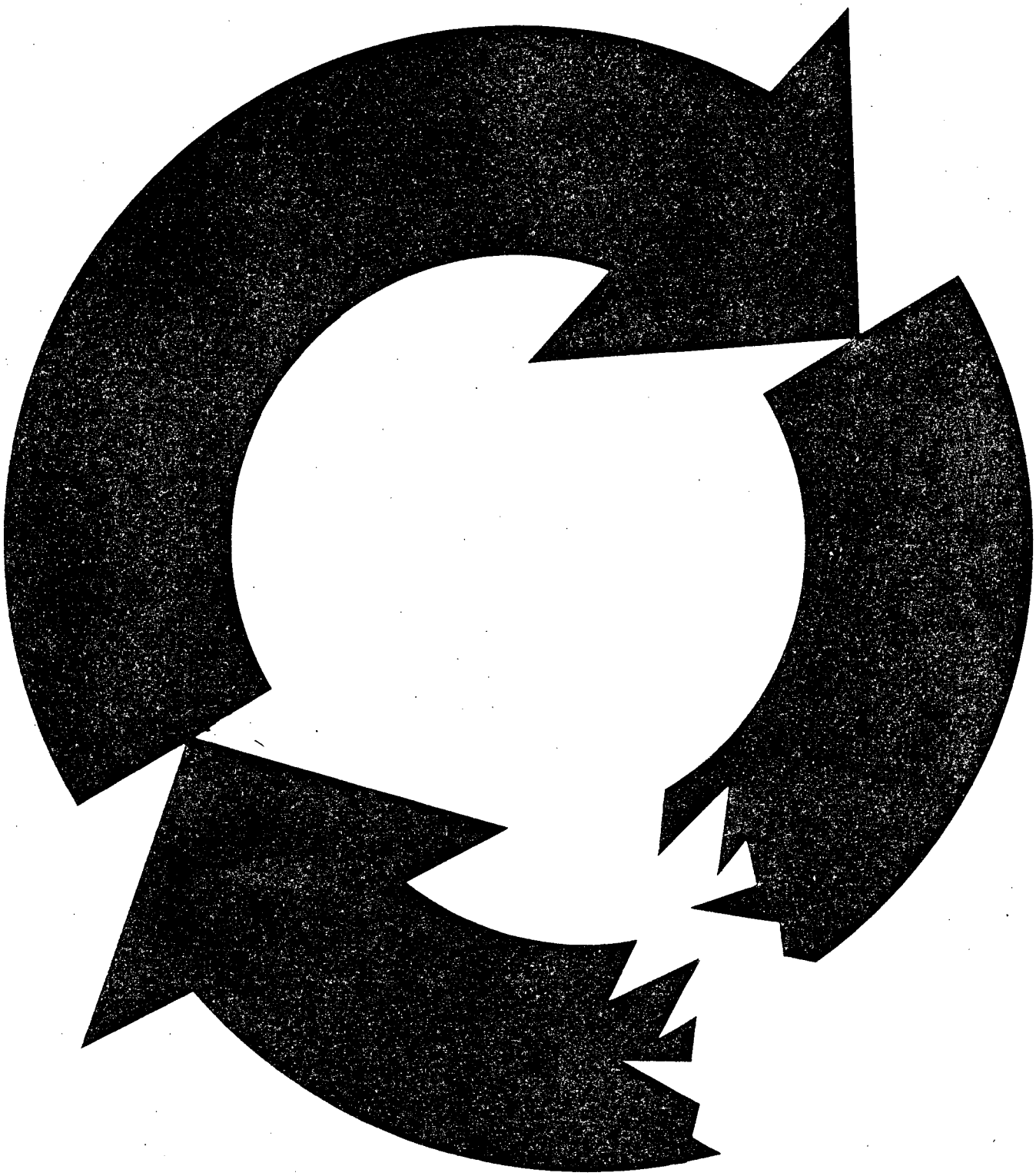

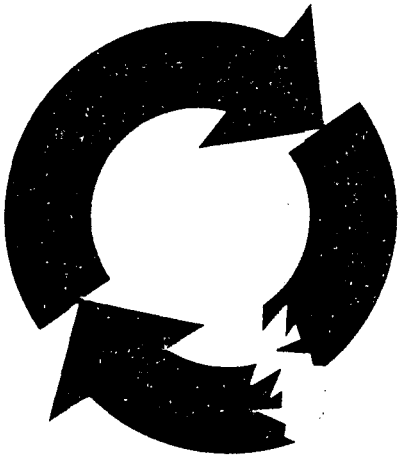

death at an early age: the eco-system

This issue of REASON is devoted to an analysis of the ecology problem. No other matter has attracted so much attention while at the same time producing so much written and spoken nonsense. In an effort to shed some light on this important subject, REASON commissioned five young thinkers in various fields to examine the problem in all of its ramifications.

Contributing editor Robert Poole leads off the issue, by defining the interlinked problems of pollution, population, and ecology; analyzing the state's role; and suggesting a political principle for dealing with all three. Engineer James Weigl probes more deeply into the problem of defining property rights to natural resources, particularly such resources as air and water. Next, computer scientist Dennis Turner evaluates pollution as an economic phenomenon, exploring the preconditions for any meaningful method of solution. And finally, author Michael Etchison dissects the utilitarian approach to social problems, finding therein the key flaw in our system of legal responsibility.

Scattered throughout the issue are comments by editor Lanny Friedlander, sometimes agreeing, sometimes disagreeing with the various author's positions. As can be seen, not everyone agrees on all points. The subject is a new one for most. Comments are welcome.

Robert Poole, Jr is a systems engineer with a Santa Barbara think-tank. He is a contributing editor of REASON.

James Weigl holds an MS in mechanical engineering from MIT. He is currently engaged in the design of respirators and other advanced hospital equipment.

Dennis A. Turner, formerly with IBM, is a computer programmer and systems analyst. He is founder and president of the programming firm of Dennis Turner Associates.

Michael Etchison is a free-lance author and columnist, whose articles have been published in a number of newspapers and magazines.

Lanny Friedlander is a free-lance writer, graphic designer, and advertising copywriter. He is currently writing a book on press objectivity.

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Mark Frazier, publisher
Lanny Friedlander, editor
Robert Lawrence, art director
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Ann Wilson, production
Tibor Machan, contributing editor
Cheri Kent, contributing editor
Robert Poole, contributing editor
Karen Gilstad, illustrator
Rod Manis, contributing editor

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Cover: broken arrow represents the disruption caused by pollution to chemical conversion and energy cycles in the biosphere.

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Next Month: indian rights, commercialism, big business, drugs and regulation, press objectivity.

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ripping off mother earth: the theft of the environment

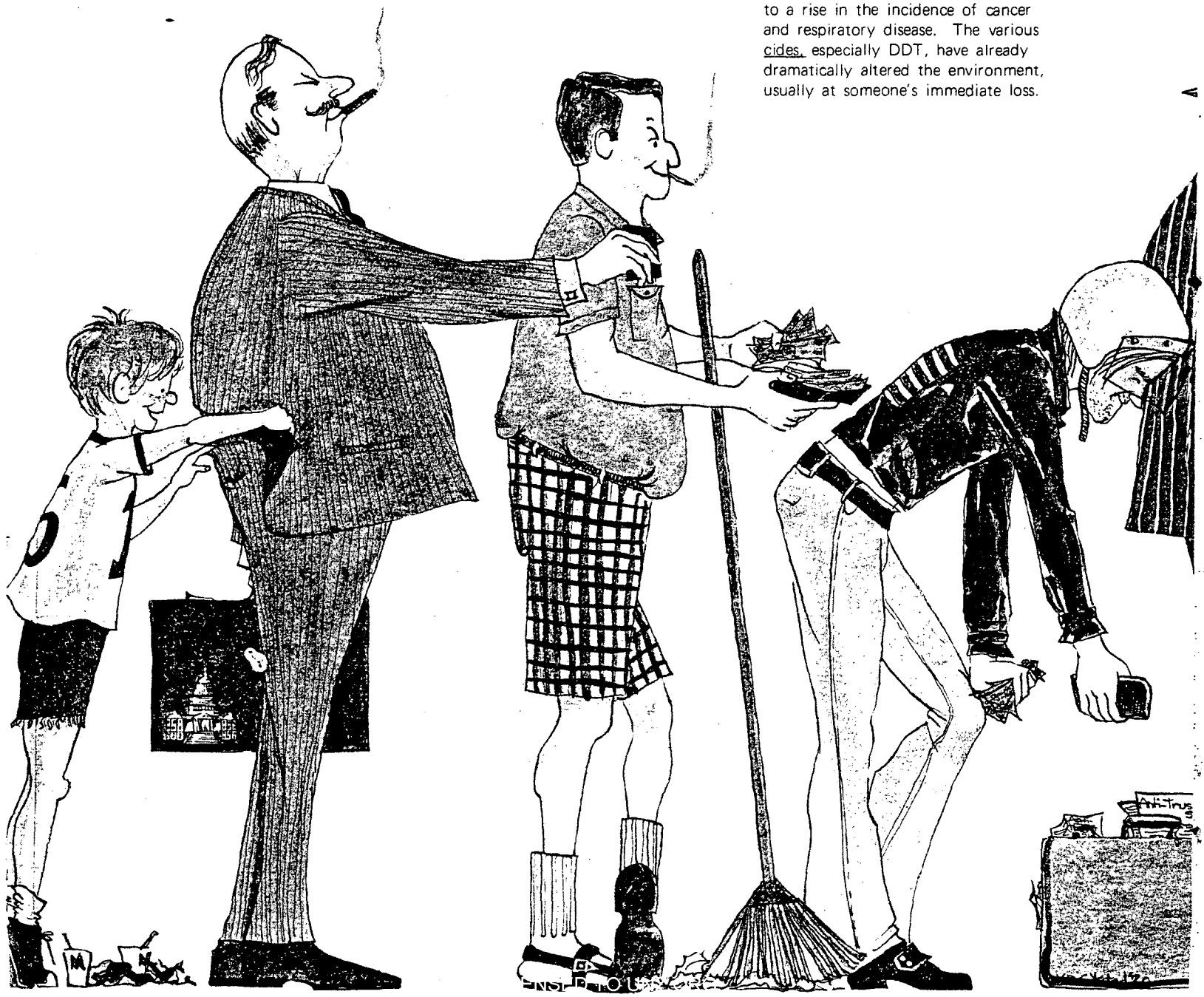
editorial

Pollution is theft.

When an industrialist fills a river's water with chemical wastes that will end up in a downstream drinking supply; when a farmer uses a persistent, non-selective pesticide; when just about everyone operates automobiles that spew toxic fumes into the air, this is theft.

When an industrialist releases his wastes to the air rather than developing reclamation methods, basically he is passing off research costs onto an unknowing (and if they know, unwilling) public who pay with poor health. Barry Commoner has pointed out this transfer of costs. I'd like to take his observations a few steps further. Without these additional steps, the pollution problem, I believe, cannot be solved.

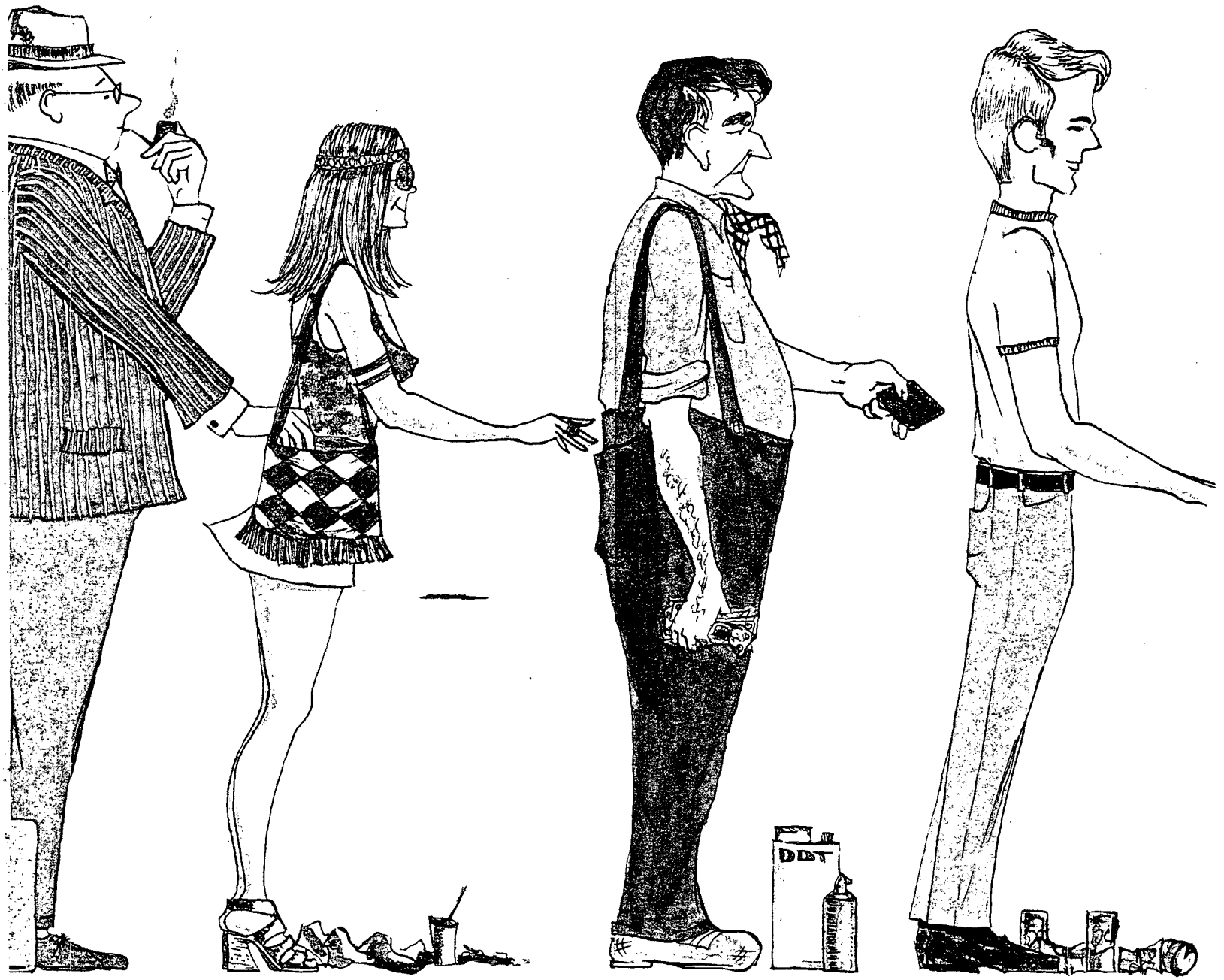
Each of these activities set into motion a chain of occurances that will either immediately or eventually cause harm to an innocent person. Industrial and automotive fumes, dispersed into the atmosphere, lead to a rise in the incidence of cancer and respiratory disease. The various cides, especially DDT, have already dramatically altered the environment, usually at someone's immediate loss.



Mr. Commoner tells us that we must decide whether we are willing to pay these indirect, often hidden costs as a price of technology. Perhaps we'd prefer a higher cost per kilowatt hour to air blackened by cheap coal. One way or the other, he says, we must decide.

The problem with this analysis, even though it is correct in part, is that it does not individualize the matter. That damn we. "We" don't decide anything; you and I and each of our neighbors decide things, individually. Because pollution is a problem experienced by individuals, defined by individuals, and created by individuals, any approach to the problem that does not deal with it on an individual basis, will not work. Perhaps through a non-individualized approach, the air could be brushed clean, the water scrubbed clear, the ecosystem adjusted. But it's not likely. Just look at the effects of the anti-pollution regulations already in effect. Terrible. Things just keep getting worse.

Pollution is defined by individuals. One man's pollution is another's paradise. A few nights ago, at a local outdoor rock concert, the strangest haze of smoke hung over the crowd. For anyone downwind who didn't happen to like the smell of pot, I guess that cloud would be pollution. To the freaks, it was pure ecstacy. There are no predetermined standards as to what is or is not pollution; it's entirely up to the individual to determine for himself what he is willing to subject himself to. No bureaucrat or ecologist or industrialist should tell him.



If objections to environmental alterations must be listed on an individual basis, so too they must be judged. There are many times when people have done things to the environment that I don't like, but because of the nature of the things, I do not have the right to expect them to desist. American cars are a drag. Can I demand my neighbor turn his in for a foreign model so that I don't have to look at his beast? Some method of distinguishing ethically appropriate objections from those which are spurious must be found. The way to do this is to develop a set of universally applicable and recognizable non-conflicting claims to the earth's materials — property rights.

But human rights are based on the recognition that the individual, not the collective is the proper area of focus for those who wish to improve society. Property rights are rights of individuals to specific material. Most of those in the ecology movement, however, have as their goal, not the improvement of each individual's life, but "survival of the (human) species" (or "preservation of human life"), and often even more delimited or irrelevant goals, such as population control or preservation of the biosphere in exactly its present form. True, these are currently necessary, but only as means to the end of individual survival and happiness. They are not sacred in themselves. Individual and collective survival are not the same thing. Concern for the survival of the species can mask a total disregard and hatred for individual human life. If, however, one works from the opposite direction —concern for the individual—the survival of the species is logically assured.

This lack of individualism has prompted the ecologists to often blame the wrong people for pollution. Detroit is accused of the pollution created by millions of automobile users, which is akin to blaming the boiler makers for Con Ed's fumes. Blame, or lack of it, is a consideration of individual nature; certain people are guilty (to whatever degree) and certain people are innocent. Environmentalists with visions of saving the world, but who don't seem to give a damn about the people who comprise it, will never be able to distinguish between the two classes, guilty and innocent, and therefore, find themselves unable to cope with the troubles they describe or predict.

You don't believe it? Think about this. Two recent books, The Careless Atom and The Perils of the Peaceful Atom, describe the adverse effects of the activities sanctioned or undertaken by the federal government's Atomic Energy Commission and point out that the AEC knows about these effects. The AEC recognizes that its radioactive gas flares and atomic reactors and atomic testing leak biologically active isotopes to the air and water, but it claims the amount involved is insignificant, hardly greater than natural background radiation. Sure a few extra people will die, (the AEC has actually conducted studies to determine the exact number) due to cancer, but it's a small price to pay for progress and the general welfare.

What can the ecologist whose case rests on the preservation of the species, which is nothing but a variant of "the general welfare," say in reply to this? Either he can begin to question the nature of the concept of the general welfare itself or he can indict the AEC as being counter to whatever he defines the general welfare to be—in which case the ensuing argument ("No, we're not." "Yes, you are.") will last well into the atomic catastrophe that kills us all. The ecologist can protest until the end of the world, but unless he begins to argue in the name of individuals, he might as well be signing the planet's death warrant.

The ways in which so many of those in the ecology movement are undercutting their own arguments are innumerable. Although many are beginning to see the impracticality of depending upon the government to clean up the mess, the process of realization is slow and painful; most still support some form of political action. This belies an inconsistency. If pollution is objectionable because it robs people of an environment that is rightfully theirs, how can tax-(theft) supported programs be any less objectionable? Theft is theft. Why should it make any difference if my wallet is emptied by the choking fumes of the industrialist or the 1040 forms of the bureaucrat? The corollary of the truth that pollution is coercion is that coercion is pollution. Both are but variants of the same evil, that of treating people as if they were here to be used, pushed around, consumed. The term environment should not be limited to trees and buildings and rivers and automobiles. It includes one's financial context and political freedom. Without freedom to move, what good is space to move in?

Despite the fact that Russia has tighter control over its people for longer than any other government, the air is no sweeter in Moscow. Don't look to the political structure for eco-solutions. The political structure, along the set of ideas that brought it into existence, is responsible for the problem. If, as many ecologists predict, we will eventually be forced to turn to government for population control, pollution abatement on a grand scale, and everything else, you can kiss the earth goodbye. Man will have failed. The government has no answer but to level a gun at someone. And a gun is no solution to the complex matters that concern the ecologists. Because of the nature of government, the only methods of operation at its disposal are non-individualized. Such methods are bound to fail. Guns are not the solution; they are the problem.

Presumably, widespread famine (or whatever catastrophe gets us first) won't be pleasant, but government-directed famines can be expected to be worse. Here I refer the reader to the work of the free market economists for their discussions of the inherent inefficiency of government, or, if you think that source biased, to any young person who has worked for the government. (I have.)

The point is, if the "private sector" fails, there isn't any point in turning to the state. One's best bet is to head for the hills. Distant hills. If private enterprise fails it will be because it never learned to individualize the problem, something the state, being simply a vehicle for power aggrandization, will never do. To turn your troubles over to the state, then, is to say you don't really want them solved. It is to say you have given up.

Pollution is theft. The way to fight theft is to abolish it, not to adopt it as one's mode of action. When those ecologists who today do not recognize this finally do, we can proceed to save the earth. Until then, we cannot. Will the recognition come in time? □

infinite sink no more

Robert Poole, Jr.

Earth day 1970 has come and gone; millions of students, thousands of newsmen, and hundreds of authors have demonstrated that ecology is *The Issue* of 1970. Given this popularity it is hardly surprising that those with axes to grind are sharpening them on ecology. Congressmen propose (literally) thousands of new laws, professional anticapitalists blame environmental destruction on free enterprise, New Leftists advocate revolution to save the environment, and advocates of Zen announce that only they can lead us back into harmony with nature. In the midst of all this shouting, one could hardly be blamed for assuming that the whole issue was merely a further symptom of our culture's prevailing irrationality. Rationality however, demands that ecology be given a closer look to see whether or not, behind all the rhetoric, there really is an issue.

There really is.

Unfortunately, some very serious things *have* been happening to man's natural environment:

In the U.S. every year some 72 million tons of carbon monoxide, 26 million tons of sulfur oxides, 13 million tons of nitrogen oxides, 19 million tons of hydrocarbons, and 11 million tons of carbon particles are poured into the air by factories, homes, and automobiles.[1] *Automobiles also discharge 250 million pounds of lead into the air each year.*[2]

"Killer smogs" have resulted in deaths in Donora, Pa. in 1948, London in 1952 and 1962, and New York in 1953 and 1966. The 1952 London smog was responsible for some 4000 deaths.[3]

Increasing acidity of rain and snow, due to sulfur oxides from German and British smokestacks, is leading to destructive changes in trees and fish life in Norway.[4] *Los Angeles' smog is killing trees in San Bernardino, 80 miles to the east.*

Annual U.S. property damage from air pollution is estimated at $12 billion by a group at MIT.[5]

A million tons of oil are released into the oceans every year, both accidently and on purpose, from oil tankers. The Sargasso Sea now contains a permanent oil slick covering several hundred square miles.[6] *Petroleum constituents are entering the oceanic food chain and could eventually reach kitchen tables.*

Over one billion pounds of active DDT still exist, either in the soil or in rivers, lakes, and the ocean.[7] *As it moves up the food chain, DDT is progressively concentrated — the amount found in nursing mothers is often 2 to 6 times greater than that allowed in milk for commercial sale.*

Lake Erie is "dead," having become so choked with algae, in response to sewage and other pollution, that the oxygen content decreased below the level required to sustain life. The same thing is happening to Chesapeake Bay and numerous other lakes and rivers.

Examples such as these could be multiplied indefinitely. It should be clear that profound changes are taking place in the environment, many of which may pose direct or indirect threats to people's lives and property.

some political responses

As ominous as the damage to the environment, is the caliber of the political responses. Happy politicians indeed are those who find an issue which appears to be virtually as "safe" as the flag and applie pie. Having chosen ecology as their issue, politicians then proceed to do what they know best how to do: create programs and bureaus and tax revenue to finance them. Thus, Nixon's State of the Union message promised "the most comprehensive and costly program in the nation's history," spearheaded by a "muscled, direct-action agency." To which Senator Muskie added, "We [the government] must spend much more [taxpayers'] money."[8] Over 1200 measures affecting water resources were introduced in the last session of Congress; 12 Senate committees vie for the ecology spotlight, as do 13 in the House.

And how well do the government programs work? Several examples will illustrate the inherent drawbacks of politicizing environmental problems. The most obvious difficulty, already much noted, is that more than one government wants to get in on the action, leading frequently to conflicting regulations. Inter-government disputes are of minor consequence, however, compared with the defects inherent in government regulatory agencies. As Ralph Nader and other "liberals" are painfully discovering, there seems to be a regular pattern in the history of such agencies — they invariably come to represent and serve the special interests of the established companies in the industry supposedly being regulated. The ICC, the FTC, the FDA — all have been carefully investigated by Nader's Raiders over the last two years and the same pattern has been uncovered in each. The main function of the agency, it turns out, becomes to protect the regulated industry from competition, while giving the government the appearance of "protecting" the consumer from the industry. All of which works out nicely for the Congressman passing the regulations (who can pose as champions of "the people"), the industry leaders (who can get by with far less effort and fewer uncertainties), and the regulatory agency bureaucrats (who can look forward to fat retirement jobs on the boards of directors of the regulated industries).

Generally, cozy arrangements of this type are supposed to take a number of years to develop. Yet the 3-year old National Air Pollution Control Agency already shows signs of deterioration. A recent AP story disclosed that between 70 and 80% of all new cars coming off the assembly lines do not meet the NAPCA exhaust emission standards, even though this is required by the Air Quality Act of 1967.[9] Added Rep. Paul Rogers ". . .what's more amazing is that the NAPCA knows this and *has known this.*" What has been going on is simple: the auto manufacturers submitted hand-tuned *prototype* automobiles to NAPCA for testing; NAPCA obligingly "assumed" that because the prototypes met the standards, obviously the production models would. So they never checked the production models!

In a similar vein, Secretary of Interior Hickel recently blasted Chevron Oil for not meeting Interior Department regulations regarding safety valves on the offshore drilling rig which leaked tons of oil into the Gulf of Mexico. The U.S. Geological Survey stated that Chevron had committed 347 violations of federal drilling regulations.[10] Years of living with government regulations and placating bureaucrats appear to have led the oil industry into the typical "special relationship" with its regulators. The emphasis, rather than on protecting the environment, is instead on getting away with the minimum compliance with regulations, with the tacit approval of the bureaucrats. Given the thoroughly politicized nature of the situation, incidents like the Santa Barbara and Gulf coast oil spills are inevitable.

Therefore, although proposals for stronger regulations and more regulatory agencies continue to be advanced, it seems highly unlikely that they will accomplish very much more than create thousands more government jobs, roundup millions of votes for environmentally-conscious lawmakers, and reduce even further competition in still more industries that come under the jurisdiction and protection of the new agencies.

Several "liberal" Senators are trying to a somewhat different approach. On January 20, Sen. Gaylord Nelson announced that he intends to introduce a Constitutional amendment asserting "the right of every American to a decent environment."[11] Sen. Nelson is supported in this plan by Sen. Henry Jackson, whose proposed amendment to the 1969 National Environmental Policy Act included an "environmental bill of rights" asserting that "each person has a fundamental and inalienable right to a healthful environment."[11] (Sen. Jackson's amendment was defeated, but he intends to introduce it again this year.) One can sympathize with the Senators' concern that a fundamental change in the legal system, rather than more and more bureaucracy, is required. Unfortunately, the facts of reality cannot be changed by legislative whim (or by Constitutional amendment). There is no such thing as a ***right*** to a "healthful environment" —are we to eliminate the flu or malaria by declaring them illegal? Shall blizzards be outlawed because they lead to frostbite and heart attacks? Likewise there can be no right to a "decent" environment, since "decent" may mean different ***legitimate*** ends to different people. To many "environmentalists" a decent environment would be one without freeways, power lines, and subdivisions. To pass Sen. Proxmire's amendment would be to abandon any pretext of objective law, in favor of an orgy of subjectivism and interest-group welfare, as each group sought to exert control over everyone else, to ensure that ***its*** version of a "decent environment" were enforced.

some other responses

As bad as the political proposals are, they are only a sample of the sloppy thinking that appears to be running rampant outside the political arena — in business and academic circles. Perhaps because the problems of the environment are so large and complex, many otherwise reasonable people seem to be unable or unwilling to deal rationally with them; since we've never faced such problems before, they appear to be saying, our past experience is irrelevant. Economists — and even businessmen — are lamenting the "fact" that the market mechanism cannot deal with pollution (not that it has so far failed to do so, but that it is ***incapable*** of doing so).

Thus, for example, we find David Kiefer, Senior Editor of ***Chemical and Engineering News,*** in his "Business Perspectives" column writing that, due to the new awareness of pollution:

"The classical concept that an economy's resources are allocated most efficiently through the free interplay in the marketplace of supply and demand, prices and utility, may prove less meaningful in the future. The time-honored theory that a market economy works best when buyers and sellers are permitted to act unhampered in their own interests through countless individual transactions will seem less in touch with reality."[12]

At the last American Economic Association meeting in New York, Harvard economist Kenneth J. Arrow advanced the thesis that pollution is evidence of a wide divergence between the "private costs" and "social costs" of goods, the latter cost including environmental effects. Arrow considers the price system of the free market to be defective in dealing with environmental effects, which he terms "externalities" (i.e., by definition outside the market process). According to a ***Business Week*** report, Arrow "proved by mathematical formulation that society would be better off if it developed some 'nonmarket mechanisms' for allocating resources where private costs and social costs were substantially different."[13]

At the same meeting John Kenneth Galbraith (after blaming pollution on the "sovereign" producer's careless pursuit of consumer satisfaction) called for " 'the replacement of the sovereign producer with the sovereign state' in determining society's pattern of consumption."[13] Galbraith elsewhere has attacked the concept of economic growth, as indicated by a rising Gross National Product. Nor is Galbraith alone; economist Kenneth Boulding states that the GNP is a measure appropriate to the "cowboy economy" of the frontier in which production and consumption (throughput) are considered good by definition.[14] However, in the "spaceman economy" foreseen by Boulding, the concern will not be with ***growth***, but rather with the efficiency by which a ***fixed*** level of activity is maintained. In this static economy, throughput is supposed to be ***minimized,*** not maximized. Boulding bases his case for a "spaceman economy" on two premises — the exhaustibility of resources and the limited capacity of the environment to sustain damage from pollution.

As economists go, Galbraith and Boulding are taking fairly radical views. Compared to the views of many environmentalists, however, the economists are conservatives. Although the specifics vary greatly, the trend among a number of prominent environmentalists is to denounce technology, ***as such,*** as the cause of pollution. Microbiologist Barry Commoner, in a ***Time*** cover story, called for "a complete overhaul of the progress through technology ethic."[15] One of the classic papers developing this rationale is the 1967 ***Science*** article by UCLA historian Lynn White, Jr. entitled "The Historic Roots of Our Ecologic Crisis."[16] White searches the history of western thought and finds that the dominant view always has been that man should have dominion over nature. This view helped pave the way for western man's technological developments, from water power to agricultural mechanization to the steam engine; similarly, in the 19th century this view of man helped to foster the marriage of the scientific approach to knowledge with rapidly-developing practical technology, leading to the massive technological achievements of the 20th century. All of this does not seem to impress White very much; focusing on the side effects of this technology, he argues that more science and technology are not going to prevent a "disastrous ecologic backlash" and that what ***is*** needed is to "find a new religion, or rethink our old one." We should abandon the view of man as conqueror of nature in favor of the ideals of St. Francis of Assisi and Zen Buddhism. (The reader should remember that this appeared in the journal of the American Association for the Advancement of Science.)

The New Left, needless to say, has picked up on this line of thought with a vengeance. A recent Los Angeles ***Free Press*** article exemplifies this viewpoint:

"The Greek rationalism of Aristotle, the Roman Engineering mentality, the biblical anthropomorphic injunctions to 'have dominion over the land and subdue every creeping thing,

the post-Enlightenment notions of growth and progress, the present technical corporate economic systems motivated by competition – all dominate the Western mentality of man against nature. Where nature works toward harmony, cooperation, and interdependence, advanced industrial society works toward growth, competition, and independence. The advanced nation state works in direct opposition to those basic life-giving ***instincts*** which have nourished our billion-year evolution. To repeat: ***the domination of man by man and man over nature are two sides of the same coin.***"[17] (italics added)

Even some libertarians appear to have been swayed by this line of thinking, to the point where one hears some of them lamenting such things as "irreversible depletion of natural resources" and questioning whether mankind's survival might not demand some form of coercive "whole-earth" master plan or "trustees of the earth" to limit population growth and prevent the "permanent loss of resources." All of which suggests the need for hard analysis to determine the true problems, their causes, their solutions.

For the purposes of this discussion, pollution will be defined as the transfer of harmful matter or energy to the person or property of another, without the latter's consent. Thus, oil spilled on a beach, soot falling on a house, sulfur dioxide impinging on a man's lungs –all are cases in which the by-product of some sort of legitimate productive activity is carelessly discarded from the producer's property (factory, automobile, etc.), causing harm to the person or property of someone else.

Why do we have such serious amounts of pollution in a country supposedly based firmly on the right to life and property? The first reason is that, for the most part, serious pollution is a fairly recent phenomenon. Once it was true, as the engineering textbooks blithely state, that the air or a river or the ocean was an "infinite sink," i.e. a body whose mass is so great that its essential properties are unchanged by the miniscule additions which man could make, in the form of smoke or chemicals or sewage. (Or as Norman Mailer put it, during his campaign for mayor of New York, "Remember when you were a kid and they said that air is invisible . . and it was?"). For centuries, pollution existed only in specific locations (like factory towns), from which one was always free to leave if bothered by the pollution.

Only in mid-twentieth century did the combination of accelerating population and a rapidly-rising standard of living produce widespread pollution of such a magnitude that large numbers of people were aware of definite harm to their persons or property. Unfortunately, our mixed-premise, slow-moving legal system has been extremely negligent in providing people with full protection of their lives and property. As Murray Rothbard recently pointed out[18], when the courts have been confronted with cases of industrial polluters vs. injured citizens, the courts have historically ruled in favor of industry, considering pollution to be a "necessary evil." Thus, the absence in the law of a clear-cut, consistent definition of rights has allowed the present situation to develop.

The level of pollution would be nowhere near as great if population were not expanding so rapidly, giving rise to more and more cars, power plants, sewage, etc. Thus, a second fact of central importance is that population is growing rapidly all over the world, greatly affecting any considerations of pollution, conservation and use of resources, or economic growth. In this regard, there is a lesson to be learned from the population problems of the "third world" – the underdeveloped countries.

Experts in population biology, such as Dr. Paul Ehrlich of Stanford, warn that in most of these countries the rate of population growth is rapidly outstripping the growth in food supply, to the point where massive famines can be expected within ***ten years.*** How has this situation come about? The single most important cause has been ***government.*** Acting in accordance with their philosophy of collectivism, the governments of these backward countries, aided by the U.S., enacted massive "public health" programs aimed at wiping out many diseases which had previously taken a heavy toll. As a result the death rate dropped very substantially. Unfortunately, the birth rate (of the now-larger population) remained the same, as the people continued having the large numbers of children which they had traditionally needed to have, in order to offset the high infant mortality rate. Only now, due to the public health measures, most of the children survived, to grow up and reproduce in an economy barely above the subsistence level.

In a libertarian society, if food supply, shelter, clothing, jobs, etc. were in short supply, this "feedback" would tend to act as a check on the birth rate, as people learned they could not adequately support large numbers of children. In the underdeveloped countries, however, government has frequently acted to destroy this feedback by handing out free food (often obtained as foreign aid) and enacting other welfare programs. Add to this the people's general ignorance of, or religious hostility to, birth control, and you have a system almost guaranteed to produce famine, given the primitive state of these countries' regulated non-capitalist economies.

Public health measures and various welfare programs have much the same general effects on people in developed countries like the U.S. – destroying the link between family size and economic reality by relieving the people of the responsibility for their own lives and actions. But the consequences have not been as severe (except for the recipients of such aid) in the U.S. because the percentage of the population affected is fairly small. Nevertheless, the population explosion does pose significant problems for this country. First of all, our rapidly-expanding population, with its increasing demand for electricity, automobiles, and manufactured goods, means that we have only begun to struggle with pollution. Even now the effectiveness of mandatory automobile pollution-control devices has been offset by the increased number of cars on the road. Power plants being designed and built today are ten times the size of those of a decade ago, and nuclear power plants posing even greater environmental dangers are being advertised as the only possible way of meeting the predicted demand for electricity. Most of today's sewage systems are loaded beyond capacity, and serious water shortages have already occurred in New York and California.

Besides increasing air and water pollution, a rapidly-increasing population means the conversion of more and more wilderness land into subdivisions, parking lots, shopping centers, etc., making escape from crowded urban conditions less and less feasible for more and more people. A second,

and more serious result is the alteration of ecological cycles.

The third major fact, then, is that the science of ecology can no longer be ignored as an ivory-tower intellectual's pastime. The most important legitimate point that ecologists like Barry Commoner and Paul Ehrlich are making is that one's actions can have far-reaching consequences on other people's lives. "Pollution," as defined previously, refers to rather direct and obvious actions — the direct transfer of matter or energy to an unwilling victim's person or property. Ecology deals with actions which are much less direct. For example, when a farmer uses DDT to kill insects in his fields, the DDT is washed away and enters rivers and streams. So does the DDT used by many other farmers. Most of the DDT (a very long-lived chemical) ends up in the ocean where it is absorbed by algae. DDT (in small concentrations) has been found to have two effects on algae: it reduces the rate of photosynthesis and it reduces the reproduction rate.[19] Why should this be of concern to anyone? Because of the following facts: algae in the sea produce, by photosynthesis, a large fraction of the oxygen needed to sustain all animal life on earth; algae are also at the base of the ocean's food chain; thus, DDT in algae affects this food chain by 1) reducing the supply of fish, due to the reduced algae supply, and 2) successively concentrating DDT all the way up the food chain, culminating with commercial food fish. Hence, DDT in the oceans is a threat to man's supply of both food and oxygen.

Large-scale destruction of forests has similarly widespread effects. Besides reducing the production of oxygen from photosynthesis, the absence of trees can increase the danger of erosion and flooding, and also reduces the bird population, allowing insects and rodents to multiply profusely. Building a large dam can likewise have many indirect consequences. Besides the more obvious flooding of a river, there are numerous changes in ecological cycles; in additon the altered loading of the earth's crust can produce seismic disturbances (earthquakes) in the surrounding areas.[20]

The point of all this is to demonstrate that ecology, by determining the large-scale indirect effects of man's actions on the life-support system of the earth, is revealing facts of reality which until now have scarcely been noticed. Neither our legal system nor libertarian philosophy have adequately dealt with such facts, to date.

libertarian analysis

Essentially, the problem can be summed up as follows: a continually-expanding population poses increasingly serious problems of direct (pollution) and indirect (ecological) disturbance of the natural environment. Such disturbances can, and often do, threaten the lives and property of large numbers of people. Politicians want to deal with such problems in political fashion — by erecting ever greater forests of regulations and investing bureaucracies with ever more power to control people's lives. Romanticists — including some economists, ecologists, and New Leftists — want to force people back to the simpler things, so that their demand for electricity, automobiles, etc. will be reduced, thereby reducing pollution. When rising population causes even this simple life to lead to pollution, they would forcibly restrict population growth. The common denominator of all these solutions is ***force***, and their frequent concomitant is irrational distrust of technology.

In the face of all this, an analysis consistent with human liberty — a libertarian analysis — has a twofold purpose: to show how political power — directly and indirectly — has been the major factor leading to the present crisis, and to point the way to solutions consistent with ***all*** the facts of reality, not the least of which is human liberty.

As pointed out earlier, the single biggest reason for there being a pollution problem is that government has failed to protect people's lives and property from assaults by pollutants. Oystermen can have their livelihood destroyed by chemicals or heated water or sewage dumped in a lake or river — and ***no one is held liable.*** Homeowners can have their houses damaged by soot or sulfur oxides — and ***no one is liable.*** Motorists can drive around in cars spewing forth carcinogenic exhaust gases into a smog-filled air mass trapped by an inversion — and ***no one is liable*** for the resulting respiratory disease and deaths. The government — supposedly the protector of our lives and property — has been so busy building bureaucratic empires and making volumes of regulations that it has failed to establish ***full liability*** for the actions of polluters. This, alone, makes government the primary culprit.

But there are also innumerable instances in which the government has encouraged pollution by direct actions. Government action is, by definition, coercive. This means, in general, that the projects the state engages in are carried out differently than projects carried out by individuals or companies. In the absence of coercive power, private parties must rely on economic motivations for accomplishing things; hence, they are concerned with long-term efficiency, in order to maximize profits. Now consider the pre-eminence of automobiles, the source of from 50 to 75% of all smog, in American transportation. The automobile has become our dominant mode of transportation partly because of massive governmental subsidies over the years in the form of tax-financed eminent-domain-obtained highways, and fossil fuel made relatively cheap via the oil depletion allowance. In a free market, the number of (privately-purchased) rights of way devoted to highly inefficient modes of transportation like automobiles, would be far less than at present. The entrepreneur seeking to maximize his profits would attempt to move the maximum number of people over his right of way, with minimum expenditure of energy (fuel). The automobile is one of the least efficient modes of transportation — the throughput (people moved/hour) of rapid transit trains, for example, is from 10 to 20 times greater,[21] and with far less energy expenditure per person moved. In a completely free-market economy, the relative cost of automobile transportation would reflect the road owner's "opportunity cost" for alternative uses of his right of way; hence, automobile transportation would be relatively more expensive and would be less popular, ergo, there would be less air pollution.

Other government distortions of the economy come readily to mind. The state often asserts ownership of scarce resources such as beaches and scenic mountain areas (national parks), in order to "preserve" them for the benefit of ***everyone.*** To carry this out, the state allows ***everyone*** free (or virtually free) access (if one's hair is short enough) to the area in question. The result is the familiar "tragedy of the commons" — since none of the users ***owns*** the land, he has no qualms

about using it, overusing it or abusing it. Hence, the phenomenon of filthy, littered, and overcrowded beaches and the horrible sight of smog hovering over the Yosemite valley. Once again, government force has created a situation which the market would not tolerate — in a free market, owners of such scarce resources would charge a price sufficiently high to ration out the supply among those most willing to pay. And the resources would be preserved rather than destroyed.

In addition to its negligence in defining pollution liability, and its pollution-inducing distortions of the economy, government also takes after the environment by more direct means: bulldozers. The Army Corps of Engineers has a well-deserved reputation for creating classic "public works" boondoggles at the expense of the environment. Writes Supreme Court Justice William O. Douglas, "Operating with virtual impunity, it continues to wreak ecological havoc across the land."[22] The Corps, like government agencies generally, is liable to no one. Similarly without liability for the land it destroys is the Agriculture Department's Forest Service, which runs the National Forests. Although private industry has long been blamed for wholesale destruction of forests, the fact is that most such destruction has been on National Forest lands, for which the Forest Service bureaucrats grant cutting rights. Since the companies do not ***own*** the land, they have no stake in conserving the forests; therefore, they have sometimes leveled them to the ground. Forests owned by large lumber producers like Georgia-Pacific and U.S. Plywood are rationally managed, with the emphasis on ***long-range*** profitability. Thus, privately owned forests are scientifically cut and reforested to assure a continuing supply of trees into the future. Again, the market wins out over government fo force. [The reader may find value in Ramparts Magazine recent (May '70) issue, which includes an article which further illustrates the role of the government in handing out resources.]

The preceding examples have pointed out the principal ways in which government allows, encourages, and accomplishes the destruction of the environment. New and more extensive government coercion is obviously not the solution to the pollution/population/ecology problem. Yet government exists and will continue to exists as a major factor in any solution. Given this fact, what sort of actions does a libertarian view suggest?

pollution solution

Murray Rothbard, among others, has pointed in the general direction that must be taken to abate the rise of effluence. No programs, no bureaus, no tax dollars are needed; all that is required is that the courts charge polluters with ***full liability*** for any and all harm induced by their activities. Once this principle is firmly established in law, firms will find it in their interest to spend large sums of money installing pollution-control equipment, rather than being constantly involved in lawsuits and damage payments. The costs of pollution control, of course, would ultimately be borne by the consumers of the firms' products, i.e. by those who ***choose*** to associate with the firm, rather than being passed on to innocent third parties in the form of pollution. Thus, the market mechanism is the only truly ***just*** way of "allocating" the costs of pollution control.

With the full-liability principle firmly established in law, the problem is reduced primarily to a technological one of determining what levels of various pollutants cause what sort of damage. Automobile pollution is somewhat complicated by the fact that there are many thousands of individual sources, each contributing only a minute fraction of the total. Yet it is a fact that once the quantity of a particular exhaust product (e.g. carbon monoxide) in a given locality reaches the level at which human health is endangered, then the right to emit such an exhaust product ceases to exist. Such a product has then become, literally, a poison. Hence, at that point, vehicles emitting that exhaust product can no longer be allowed to operate in that locality.*

There has been some disagreement among libertarians on the proper method method of dealing with air pollution. Certain economists of the Chicago school, such as Prof. Harold Demsetz, are fond of stating the case that pollution has occurred because air has always been considered a "free good" when in reality it was a scarce resource. Hence, since nobody owned it, nobody had responsibility for it and everybody went ahead and polluted it — another "tragedy of the commons" situation. The cure, they argue, is to stop treating the air as a free good, and somehow ***price*** it. Prices presuppose ownership, yet nobody owns all the air; hence, the only kind of air which could be owned and sold is purified air, which could be piped into people's homes and factories after being treated in a purification plant. The users of this air would pay for it, much as they now pay for electricity or gas. Everyone else would be left to breathe the free polluted air, if they could. Eventually gas masks would be required outside of buildings, and trees, birds, and animals would have to survive as best they could. The entire ecosystem would undergo vast changes; food might have to be grown underground, or in huge purified-air hothouses. But, never fear, the ***market*** would be working, supplying purified air in accordance with supply and demand (!)

What is wrong with the preceding "free-market" analysis? On the surface it seems reasonable (aside from the grotesque nature of the world it would lead to). Unfortunately, it is an example of the most serious failing of the Chicago economists: nowhere in the argument is there any mention of ***rights***. This is the same failing that has undercut the advocates of capitalism for 200 years. Even today, the term "laissez-faire" brings forth (to the average man) images of 18th-century English factory towns engulfed in smoke and grimy with soot. The early capitalists agreed with the courts that smoke and soot were the "price" that must be paid for the benefits of industry — i.e., that the "public interest" required the sacrifice of somebody's property rights in order that all could enjoy manufactured products. Yet capitalism without rights is a contradiction in terms — capitalism is based on and derived from man's rights, and can endure only when rights are held inviolable. Now, in an age of increasing awareness of the environment, this old contradiction is coming back to haunt capitalism, and the Chicago-school people are only providing grist for the anti-capitalists' mill by their avoidance of the issue of rights.

It is ***true*** that air is a scarce resource. But one must then ask ***why*** it is scarce. If it is scarce because of a systematic violation of rights, then the solution is not to apply the free market to the status quo, thereby ***sanctioning*** the rights-violations, but to assert the rights and demand that they be protected. One ***could*** analyze a slave market in "laissez-faire" terms, and it might be of academic interest to do so. But that description would not legitimize the institution of

slavery. Nor does a free-market description of air pollution legitimize the daily violations of people's lives and property by polluters. The air, after all, is only a medium through which various molecules move. When a factory discharges a great quantity of sulfur dioxide molecules which come floating into my lungs and cause pulmonary edema, the factory owners have aggressed against their neighbors as much as if they had shot up the town. That there may be all sorts of economic consequences of the sulfur dioxide emission (i.e., land values, housing patterns, product prices) is interesting but irrelevant to the basic issue — the rights violation. Libertarians must be explicit on this point because it is vital to the entire libertarian and laissez-faire capitalist position. A laissez-faire capitalist polluter is a contradiction in terms and must be identified as such. A libertarian society is a full-liability society, where everyone is fully responsible for his actions and any harmful consequences they may cause. The market mechanism then operates with prices which include the ***full*** costs of all products — there are no "externalities" to pass on to innocent third parties.

population

How does this libertarian view deal with the population problem? Essentially it recognizes that there is not, and cannot be, a population problem where there is full liability — i.e. where everyone is fully responsible for his own life and actions. The "problem" comes about when government — by action or inaction — separates actions from their consequences. How this has worked in the underdeveloped countries has already been described. The upcoming famines over much of the earth will provide an eloquent — if gruesome — demonstration of the evil consequences ***in reality*** of the state's attempt to remove from the people the full responsibility for their own lives.

But what of the United States? Is there a population problem here? Before answering this question, it must be re-emphasized that we do not presently live in a full-liability society. If we did, then the decision to have children and the costs of their upbringing would be entirely the responsibility of the parents involved. In such circumstances, the birth of someone else's child could not possibly impose direct costs on third parties. Hence, although I might not ***like*** a crowded country, I could not complain that the increased population was actually a threat to me.

Contrast this with our present society. Every child born to people on welfare is a direct economic threat to me, since his existence will increase my taxes. Similarly, every child born anywhere in the country is a threat to me, since I, as a non-parent, am forced to pay local, state and federal taxes to support public schools. The public school system consititues a vast subsidy from everyone else to those who are parents of school-age children, encouraging these parents to have and raise children without having to bear the full costs of thier education. Hence, not only does the system violate my rights ***in the present,*** it also provides a continuing incentive for more and more people to have more and more children, secure in the knowledge that they will only have to pay a portion of the cost of educating them. The extent of this subsidy is so vast that it makes the $600 tax exemption for each child look almost negligible.

Beyond such direct costs of increased population, until such time as full liability is required of all polluters, any increase in population will result in increased pollution (more cars, more factories, more detergents, more pesticides, more sewage, etc.), with the resulting harm to my person and property. Since full liability is not likely to come about soon (past federal programs will primarily disguise the pollution problem, while claiming to solve it), an expanding U.S. population will indeed pose a threat to life and property in the forseeable future.

Given that this is the case, what positions should libertarians advocate with regard to government policy on population? To say that government should should just do nothing (since having children is an individual concern) misses the point that we live in a society in which government is ***already*** actively encouraging and subsidizing the increased production of children. For the government to ***actually*** do "nothing," it will have to ***stop*** doing a host of things it presently does. The first thing the government could do would be to repeal ***all*** laws regulating sex and marriage. On a variety of levels, and through numerous statutes, the government prohibits many attractive forms of birth control. Abortion is almost universally available only through the black market because of state laws, Massachusetts prohibits the sale of contraceptive foam to the unmarried (it is sold anyway), and the Federal Drug Administration can probably be fingered as being instrumental in the scrapping of a number of male and female chemical contraceptives that are highly effective but for easily avoidable side effects (see upcoming FDA article). The one exception to this pattern is voluntary sterilization, which is legal in all but one state.

The governments and laws also disincline all but traditional monogamous marriages which has the effect of encouraging people's life-styles to fall into the typical suburban three-child "nuclear" family pattern. Other possible life-styles — group marriages with a few children raised by several couples, homosexual marriages — are illegal because they are "against public policy," that policy presumably being the maximization of child-production by the nuclear family. By allowing people to legally choose whatever life-style they desired, the social pressure to conform and have three children "like everybody else" would be reduced. Along with these changes, of course, the current tax discrimination against single people should be abolished, such that there are no longer tax incentives favoring one life-style over another.

Following these changes, the government should begin phasing out the public school system, perhaps at first by means of Milton Friedman's voucher system, but ultimately returning educational expenses where they belong — to the parents. Finally, the government should work toward eliminating all forms of welfare, recognizing the incentives provided by the welfare state for increasing population. With regard to public schools and welfare, libertarians should note that the population issue has given them a unique opportunity to influence "liberals," since many "liberals" are very concerned over population, but only beginning to see the incentive-producing nature of the public school and welfare systems for so long they have supported.

ecology

Finally, what does the libertarian view imply for ecology? The basic principle is again full liability for one's actions. The major contribution of the ecologists is to discover the facts of reality inherent in the complex cycles which

take place in the earth's life support system. That many of these facts are new and unfamiliar does not mean that they are any less real. If everyone continues to dump DDT and other chlorinated hydrocarbon pesticides into the earth's water supply, for example, we will end up seriously short of fish and oxygen. Ecology can tell us what the consequences of certain actions will be, so that we can evaluate then, hopefully in advance of causing serious harm. Clearly, the result of ***some*** such evaluations will be the conclusion that certain actions, if continued or engaged in, will cause demonstrable harm to human life, because of the resulting changes in the ecosystem. Such actions may legitimately be prevented, by force if necessary, since if carried out, these actions would be aggression against some or all of humanity.

This is not to say that any time an "ecologist" asserts that he doesn't like a certain factory or dam or farm or other enterprise, that it must be shut down. Ecologists don't have magic insights not possessed by others; the same need for rigorous, logical thinking required in any science is required by ecology. Since the epistemological principles are universal, ecologists can and must demonstrate to non-ecologists ***what*** facts of reality they are concerned about, ***how*** they know, what the implications are for action (or causing action), and ***why*** this action is required. Unfortunately, in our irrational society, this is no easy task for ecologists. For this reason, perhaps, one should not yet be hypercritical of the attempt by men such as Paul Ehrlich and Barry Commoner to dramatize the possibilities of "eco-catastrphies," even though such attempt attempts may involve exaggerations. Perhaps such tactics are necessary to awaken our concrete-bound legislators and jurists to the need for an enlarged concept of liability.

At the same time, however, there is no excuse for tolerating an ecologist's irrational feelings about economics or technology, just because he ***is*** an expert on ecology. Thus, when C Commoner calls for overhauling our "progress through technology ethic," it is up to rational technologists to set the record straight. This is even more necessary when non-ecologist ecology fans start making pronouncements about halting the "irreversible depletion of resources" or ceasing to "exploit" nature.

As the preceding analysis has shown, it has been men's faulty conception of rights and responsibilities which has led to the present pollution/population/ecology crisis. Technology, to be sure, has provided various tools which men can use, but the existence of technology does not guarantee that men will use it rationally. This is determined by their philosophical premises, particularly their political philosophy.

But technology itself is not neutral; technology is inherently life-supporting in that it seeks to apply man's understanding of the facts of nature, to enable him to live on earth (or in space) more effectively. For most of recorded history men were imprisoned by a subsistence economy in which so much effort was required merely to stay alive that there was little or nothing left over for improving their physical well-being. This was the world described by Malthus, in which the size of the "economic pie" is fixed, such that one man's gain can only be procured by another man's loss. But capitalism, by providing an atmosphere in which technology can flourish, can change all that. The size of the pie increases, such that everyone gains.

Buckminster Fuller is one of the few men alive who seems to fully appreciate the significance of technology. He points out that at the turn of the century, less than 1% of the world's population was participating in the benefits of industrialization; by 1914 this had risen to 6%, by 1940 to 20%, and by the 1960's to 44% of humanity. How has this been possible, given the fixed amount of resources which the eco-fans are worried about "depleting"? Fuller writes:

"As the percentage increased from one to 44, it meant that total organized world tonnage of metallic and metabolic resource utilization was supplying only 1%, then 6%, then 44%. During this half century of industrialization, the world's population has been increasing at a faster rate than additional resources have been discovered. That is, the ratio of world copper, mined or unmined, or of iron, mined or unmined, per capita, has been continually decreasing. Therefore this increase in numbers served has not been the result of the addition of more resources, but the consequence of scientifically-designed multiplication of the performance per unit of invested resource. Transferring communications from wire to wireless is a typical means of doing more with less."[23]

This is the essential nature of technology – finding ways of doing more with less and less use of resources, per unit of accomplishment. The supply of raw materials on a "space-ship earth" is fixed; true, some can be used up in their present form (such as oil), but the law of conservation of mass states that matter is never "used up" (except in a nuclear reaction) – it merely changes its form. The basic chemical elements remain, available for man's ingenuity to put to better use.

"Science continually does more with less each time it obsoletes and scraps old innovations. Scrap is resolved to some part of the inventory of the 92 regenerative chemical elements. Interim improvement in technical measurement of performance makes possible an ever higher magnitude of new performance by reuse of the same quantity of the original inventory of the chemical elements."[24]

Nor is there a real need to despair over our use of energy; again, the law of conservation of energy states that energy can neither be created nor destroyed (except by a nuclear reaction, when a quantity of matter is converted completely to energy). At present, the earth is living off of easily obtained stored-up energy ("savings") such as oil and coal; yet the earth also receives daily "income" in the oil form of solar energy, at present virtually untapped. Thermonuclear fusion power is a likely future development, probably before the end of this century, providing virtually unlimited energy from hydrogen, the simplest of all elements.

Thus, far from being a threat to mankind's survival, technology provides the means for enabling all of mankind to enjoy a better life, participating in the "industrial equation," by means of increasing the usefulness of our supply of resources. Technology produces real wealth, in the form of the increased capability of man to do things, per unit of matter or energy expended. Redistributing the existing wealth provides no net gain. Wealth must be produced, and technology is the means by which this is accomplished.

But it is only in an atmosphere of ***full-liability*** freedom, true laissez-faire, that mankind can have ***both*** ecological awareness ***and*** technological progress.

Those who cry that we must choose between a technology which destroys the environment or a simplified, static, no-growth society misunderstand both technology and ecology. Nature, to be commanded, must be obeyed; to have dominion over the earth, man must command increasing quantities of knowledge and act accordingly. The men of a full liability society, having learned this lesson, can have their cake and eat it too.□

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footnotes

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Notes on "technology"

The term "technology" can be taken two ways, and it seems to me that this twin use of the same word symbol for two interrelated but separate concepts has helped to cause no small amount of confusion. Technology can refer either to the the totality of mankind's information or to the tools of production via which men apply that information towards achieving aims. Perhaps, for clarity's sake, it might be best to refer to the latter as ***applied*** technology, and the former as plain old technology. With this distinctive set of definitions in mind, it can easily be seen that technology is never neutral, and assuredly never detrimental, but always beneficial. Greater technology means that men have a greater number of options to choose from, as well as a larger data base with which to develop more data and new options. On the other hand, ***applied*** technology, is intrinsically neither good nor bad. While "technology" is a term that refers to a particular state of mind, knowledge that, by definition, is good, "applied technology" refers to physical objects, machines, factories, oil wells, farms, people, animals, etc. in their capacities as tools of production. Rather handsome and useful tools of production can and do fall into the hands of rather ugly men. The atom bomb, radioactive gas flares, and unsafe atomic reactors are in the hands of Tricky Dick and his Congressional cohorts. Millions of dollars are clenched in the fists of Commie-baiting businessmen or revolutionist-sympathizing foundations. There is nothing but the efforts of good men to guarantee that this kind of thing won't happen. ***Applied*** technology will work as well for anyone, honest or dishonest, who knows what buttons to push. Technology, of either variety, applied or otherwise, can never be evil; only ***people*** can be evil. Thus to condemn technology as the cause of ecological disorder is to betray what amounts to a belief in demonology. Men can never have too much technology (applied or otherwise); they always have too little. If the ecosystem is disintegrating, it isn't because of technological overabundance, but for immense deficit.

Specifically, mankind lacks the technology of ethics, the knowledge of the proper kinds of interrelationships among men. We are not the first to point this out; many have wondered at the spectacle of a civilization that can put men on the moon, but cannot think of a rational reason for wishing to do so, a world that proliferates weapons of mutual destruction under the guise of "deterrence" of mutual destruction, and so on. Physical giants, moral pigmies, are the words one commentator used, I believe. So true.

Sadly, those who speak of the need for an inspection of our culture's ethics almost always make the error of implicitly assuming at least some of the premises of the ethical system they criticize, thus undercutting the usefulness of their observations and their work towards ecological balance.

In only one respect do the problems demand a reduction in technology. Men must discover which of the ethical "truths" they hold are not true at all, but based on erroneous observations or plain craziness. Presently, these "truths" are widely accepted and therefore mentally placed under the data categories of useful information . Thus, what men are pron e to call technology (information) is too large. It should be shrunk by ferreting out the mistakes. But even by this analysis, what needs to be accomplished is not in fact a reduction of technology, but the development of philosophical insights that would allow men to properly categorize arguments in favor of cultural coercion as the absurdities that they are—that is, an increase in technology. ***—Ed.***

the snow turns black in moscow too

Michael Etchison

The author argues for a new ethic, not only for man among men, but for man amidst nature.

I could, but for two reasons, try to pass pass this piece off as a commentary on an article* by Prof. R. H. Coase of the University of Chicago. First, the article is a decade old, which is to say, practically prehistorical; second, I'd never get away with it. Even though it's true that my thoughts were immediately occasioned by the Coase piece, which I just ran across, in fact Coase was a stimulus, not a source, so why should I try to hide behind the commentator's mask?

Let me caricature Coase briefly, so you know what went before. Since the end of the 16th Century, the prevailing opinion in Anglo-American law has been that the most important factor in deciding cases is not justice — who is right, who is wrong — but social utility — which decision would benefit society most. As you might imagine, different judges have had different notions of where the public good lay, but apparently all agreed with the principle of social utility.

In an example after Coase, suppose that Farmer Jones raises cows, some of which wander into Farmer Smith's fields and snack on Smith's crops. Coase says that the prevailing tendency in cases like this, in deciding whether Jones or Smith or somebody else or nobody ought to bear the cost of keeping the cows out of the vegetables, is to inquire which result — the cow's continuing to nibble, or the crops' growing unmolested — helps society more. Some judges will do an economic analysis in such a case, figuring whether the crops or the cows contribute more to society; others will think of the case as precedent and try to figure which class of result will help society more (help still being defined economically as a rule, but over the long run).

Whichever it may be, Coase maintains that the specific decision makes not difference to society, as long as some decision is made. He works from the Austrian principle that the operation of a free market by definition results in the optimum assignment of resources (assuming costfree negotiations). In other words, if the crops are worth more to Smith than a fence would cost, and the nutrition that Jone's cows get is worth less than the fence, Jones will pay to build the fence whatever the court decides, and so on through the set of permutations. Both Smith and Jones, that is, have goods at stake, and by bargaining will be able to come to a mutually agreeable adjustment.

A second example that Coase uses is that of a railroad engine which gives off sparks, setting afire a neighboring forest. The courts, apparently have consistently held that the railroads operate under a charter from society (the state), which is prima facie evidence that deciding in favor of the railroad line is to the social benefit. Since as a matter of fact almost every major commercial enterprise since the Industrial Revolution (before, for that matter) has operated under a charter (every corporation does, of course, so that it has legal protection for the notion that no person is liable for anything the corporation does), it follows that as a general rule a business concern can do pretty much what it pleases in the way of fouling its neighbors' nests, as long as it doesn't vary from the custom of the trade.

Although there have been some recent exceptions to that rule (some homeowners, for example, have won suits for noise against airlines and airports), they have been few. Nevertheless, Coase says again, it makes no difference whether the law takes the railroad's or the landowners' side, because by the operation of the free market they can come to a bargain which will adjust their claims.

You must remember that a doctrine of prices underlies Coase's economic analysis. According to that doctrine, prices are "set" by the interaction of a number of bidders for various goods, both bidders and goods competing. By this ecnomic analysis (the orthodox Austrian analysis), society may be identified as the sum of all the competing bidders. Although this seems arcane, what it means is that the price structure of the moment becomes the expression of the "public good." Thus, when Farmer Smith and Farmer Jones bargain about who, if anyone, should pay to have the fence put up, they are (assuming they are part of the price nexus and not as a matter of principle or circumstance self-sufficient) bargaining in terms of what their respective products, crops and cows, are worth, which is to say what the prices are, which is to say, what they are "worth to society."

In a smoothly settled negotiation in which individual quirks and costs of negotiation have no part, the result of the bargaining will, by logical necessity, be to the greatest public good. Economically, that is.

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*"The Problem of Social Cost," *The Journal of Law and Economics,* Vol. III, October, 1960, pp. 1—44.

Much the same with the railroad. If the parties are free to negotiate (and quirks and costs don't interfere), the outcome will be determined by an adjustment among the profits of the railroad, the cost of preventing sparks, and the value of the forest. Again, because of the way the argument is set up, the result will necessarily be to the public good.

Following this reasoning, it is easy to see that progress, economically defined, can be made to be one of the bases of our legal system; indeed, it may be regarded as merely an alternate expression of the notion that the end result of the legal system ought to be the greatest public good.

Attentive readers, especially those with philosophical axes to whet, might be starting to wonder whether the Utilitarian doctrine, however discredited it might be in ethical and political philosophy, has not managed to insinuate itself into our legal system. In fact, exactly that seems on cursery glance to be so, which I think bears some brief looking into.

The main problem in political philosophy has almost always been to arrange matters for the maximum convenience (however defined) of the ruler. Some philosophers have maintained that the welfare of the community is to be taken without reservation as the ultimate good. Others, even while maintaining the primacy of individual rights, have regarded themselves as technicians trying to set up a smoothly-running government which, they believe, will as a matter of course operate to protect rights. The Federalist writers, for example, begin by saying that governments ought to secure rights, and then spend most of their time trying to insure that the government will survive and prosper, enjoying all the usual perquisites of power.

I used advisedly the word "technician" a moment ago. I had in mind the contention of the Austrian economists that an economist ought to be able to speak of actions and necessary consequences without advocating any particular action or consequences, something like a doctor who didn't care if his patient lived or died. Or, alternately, a lawyer who can advise a client how to conduct his affairs to accomplish a particular end, regardless of what opinion he, the lawyer, might personally have about his client's rectitude.

Just so, a political or legal philosopher ought to be able to tell a ruler how to run his country to accomplish any given purpose. Rulers, as it happens, have only one important characteristic in common: they want to keep the job. As it also happens, the most likely client for a political philosopher on the make is a ruler. Thus, it is not surprising that all political philosophies have one important feature in common: they all give detailed instructions on how to keep a state going.

If you start with the notion that a—or the—primary function of a legal-political system is to perpetuate itself, and add to it a notion that greater profit is in some way a sign of greater public good, you are quite likely to end up the set of notions that I ascribed to Coase. (However, Coase is too good a technician for me to be confident that he personally subscribes to the views he expresses.)

Imagine, for example, that you are called on to decide who should prevail, an insignificant farmer whose only claim to your interest is that his land adjoins a railroad track, or the owner of the railroad which will make transport of goods and persons so much easier and cheaper that commerce will prosper, the connected cities and the commonwealth will thrive, the consciousness of the citizens will expand to include all the places and ideas they could not previously reach; the railroad's employees will take home more money, the railroad's suppliers will be enriched, and the nation's tax coffers will swell. Would you hesitate to say that the railroad may proceed to dump on the farmer?

If you would hesitate, then you are libertarian material. You may or may not appreciate the benefits of civilization, especially the material benefits; you may be Luddite or Fullerite. But by God you have not forgotton the dumped-on farmer and his modest but inviolable claim to consideration. Neither, as you may gather, have I, and I say hurrah for both of us.

Those charged with the welfare of the state may worry themselves sick trying to keep their racket thriving, but it is no concern of mine. A nation of calm, unoppressed citizens will manage to find happiness, I believe; a nation in a hurry to progress no matter what will end up just like us. By the way, it makes no difference in this analysis whether the society is capitalist or socialist. Competing claims will be adjudicated, whoever the ultimate owners are.

It would seem only fair, since the consequences of the existing notions are all around us, to give some idea of what following the contradictory notions would cause.

First, you will have to assume with me that any prevailing political notion is supported by prevailing ethical notions. More concretely, you can't expected to find a nation that gives priority to rights unless its citizenry individually gives priority to rights.

It would be in the spirit of Coase to object that in any event, the two parties could always make a deal; the farmer could sell his objections to the railroad's sparks. This, however, is exactly the same as selling your objections to someone's hitting you. Boxers and other psychopaths may do so, but not normal persons. In a society that was not predisposed to progress, I believe, it would be unlikely that anyone would sell the right to burn his forest. Especially if forests were widely believed to have a value not readily measurable in economic terms—if, say, people loved the earth. The consequences of a libertarian spirit in the railroad example are hinted at above. If it were possible to operate that particular kind of train at all, the cost would be higher (by assumption—otherwise the facts in the example would have been different) to prevent sparks, or to buy insurance against the farmer's claims. This would raise the cost to all concerned, which would mean that the railroad probably would be used less and therefore affect society differently. If it were not economically feasible to operate that kind of train, then either a different, more expensive, kind would be developed sooner or later, or trains as such would never have developed. Either would mean that the consequences of railroads on society would be altered.

To take a limited historical example of what that could mean: In America, during the great railroad expansion of the 19th century, the great railroad empires would likely not have developed, nor would the attendant corruption of legislators and system of subsidies and grants and bribes. A lot of buffalo would not have died. Timber that went to make ties and stoke engines would have remained standing. The great land exploitation

schemes would not have happened, and the peopling of the West would have been slower (which in turn means that the country's population would have increased less rapidly). Coal and iron resources would not have been so depleted, nor would the land in which they were found been so scarred. The Pullman strike might not have occurred. The expansion of telegraphy would not have taken the same course. Travel across the continent would have been more difficult, so the isolation of the coasts from each other would have been greater. And so on.

(There's one obvious objection I would like to mention, namely that most of the land through which the railroads went was unowned. In the first place, effectively cutting the railroads off from areas where the land was unowned—or requiring them to buy all the land they would emperil—would have been a great discouragement, anyway. In the second place, I think that at least under the then-existing circumstances, the American government could properly be said to have been acting, at least in name, as trustees of those lands for the American people. After all, the government did sell and give away the land, which hints some kind of ownership claims. A trustee, of course, is obliged to act prudently, and exposing property to the risk of fire is hardly prudent unless progress is deemed a good not to be questioned.)

I admit to not having done any historical research to speak of, so I could not say how many fires railroads did in fact set during those days, or anything like that. Apart from laziness, I don't think I need to know. All a railroad director would need to know would be that if he caused a single fire he could be shut down or obliged to move his track elsewhere. Besides, I think a strong case could be made for the law's (whether legislative or judicial) requiring proof of elimination of the danger of sparks before a railroad would be allowed to operate, not because trains are necessarily evil but because the consequences economically, esthetically, and ecologically of a fire in a forest are likely to be considerable.

Of course, if libertarian notions had been prevailing for any time, the 19th Century would not have been the age of railroads in America anyway.

The same sort of analysis can be made of the case of the wandering cows. If it were simply against the law for Jones to let his cows wander onto Smith's fields, then either Jones will have to put up fences at his own expense, thereby raising the cost of everything he produces, or he will have to join up with Smith in some kind of partnership. (Or he could maintain that the cows could have chosen not to wander, but then he would give up his right to keep them in the first place, wouldn't he?)

The consequences of this in the American West in the 19th century would be a little less momentous. The inventor of barbed wire would have been much richer. Western movies would have lost the cattleman-sheepman confrontation. If any kind of sanity prevailed in doctrines of property, spreads would have been smaller, and therefore herd sizes would have been smaller, which would have meant a diminished economic (and political) role for cattlemen in the West. Again, the pattern of development of the West would have been different.

In earlier times, however, the impact could have been far greater. I said just a minute ago that fences would have to be put up or a partnership formed. Either course could have become the precedent, resulting in greatly different social traditions with, I believe, practically equivalent consequences.

The key is the notion of "the commons." A pasture in which everyone's livestock may graze is a commons. (Much of the American West was, in fact, a commons, as Robert Poole has pointed out. [REASON, Dec. 69] Usually a commons is held to be the "property of the community," such as a village or a tribe. Under many circumstances, commons have worked. But it is easy to find ways in which a commons can fail. If, for example, someone introduces sheep into a commons previously grazed only by cattle, he is likely to make some enemies because sheep graze lower than cattle leaving nothing for cattle. Even if only cattle graze, a herder is likely to face this problem: If a new cow grazes in the commons, then there is a little less pasture per cow for everyone, and only the person who owns the cow benefits. If it is someone else's cow, I am deprived of my previous share in the commons; if it is my cow, I get the advantage of another cow at practically no increased cost to me. Therefore, hadn't I better get a lot of cows into the common right away?

Unfortunately, the incentives work the same for everyone else as they do for me, and the result is that eventually everyone tries to get a lot of cows onto the commons and no cow has enough to eat. (Oil pools, of course, present similar problems. So, from a global point of view, does every resource.) There are two ways out of this dilemma, both with attendant drawbacks. The commons may be divvied up to private owners, which could lead to the present caricature of a property-based society in which nobody may be deterred from anything; or it may continue to be held in common, with a board of elders or some such setting quotas, making possible all the irrationalities of socialism.

The true solution of the dilemma is that the two antithetical traditions would at least in utopia yield identical results. In a pure ownership tradition, "ownership" would ultimately go to the person best suited to use the resource, with the reservation that he would not be permitted to use the resouce so as to hurt others. In a pure communitarian tradition, the "quota" would go to the person best suited to use the resource, with the reservation that he would not be permitted to use the resource as to hurt others. The impediments to utopia are obvious, and may be briefly named: corruption. But I maintain that in both traditions the impulse is there.

In an uncorrupt society, of either tradition, economic progress, although not forbidden, would be allowed only if it occurred at no third party's expense. I have a hunch that this would result in the impulse to progress being diverted to moral, spiritual, and esthetic progress, and in material progress's being more a matter of refinement than of extravagance (in other words, not more but better). Thus the present ecological crisis would be averted, or at least postponed.

(I would hate to be misunderstood as saying that socialism and individualism are identical. Ludwig Von Mises has demonstrated to my satisfaction the economic unfeasiblity of socialism as an economic system, and the psychological differences between the two would be considerable for individuals, especially creators and other cantankerous persons.)

What I am saying is that it is foolish or worse to blame the ecological crisis on either capitalism or socialism, entrepreneurs or planners, traders or rulers. The blame should be placed on short-sighted or evil persons, persons who coercively exploit people and nature. A man who by law or conscience is

restrained from doing harm to others is not going to produce millions of cars with internal combustion engines, in a socialist or a capitalist society. And the law that would restrain him is not abhorrent to either utopia socialism or utopia capitalism.

In a conversation someone once explained to me how a particular oil company was trying to eliminate pollution, and how a chemical company was attempting to prevent harmful consequences of such of its products as pesticides. I said that if I owned either of those companies and I learned that I was producing poison, I would stop immediately, sell what I could, and get the hell out before someone caught up with me. There may be some moral credit to be gained by saying you are killing a few less people today than you did yesterday—but why don't you stop outright?

Maybe the political-industrial cartel doesn't really believe all the ecological horror stories; perhaps they haven't even heard them. That would be bad enough. But what are we to say of the power company that says it is to be congratulated for reducing air pollution by converting to nuclear power plants (without mentioning nuclear wastes and thermal pollution)? Or the gasoline distributor who seeks applause for knowing how to reduce pollution a tiny bit (yet keeps selling gasoline)? Or the steel producer who says that it is unfair to require him to eliminate the pollution from his stacks when his competitors, foreign and domestic, don't have to go to the expense (as if he had any right to pollute in the first place)?

Obviously those who own these companies—both managers and shareholders—have not the conscience to stop. But there is no reason why what they do should not be illegal. There may be practical reasons for stopping them *quickly* rather than *immediately*—the fact that thousands, maybe millions of persons would die in cities if internal combustion engines were forbidden immediately—but there are no moral reasons. To forbid pollution is not to deprive someone of his right to earn a living, any more than jailing a Mafia gunman is.

Charles Luce, the man who runs Consolidated Edison, has admitted (on the Today show, of all places, during Earth Day, of all days) that by the year 2000 if power production increases as it is expected to, power plants will produce enough heat to raise the temperature of all the water that flows across the United States twenty degrees. He suggested that the heat might instead be dissipated in the air. He did not say that he was immediately beginning a campaign to raise the cost of electricity and do everything else he could think of to discourage the use of electrical power. Nor was he planning to quit his job.

As it happens, whoever holds Luce's job would be obliged to contribute to that promised catastrophe. It is not bad enough that the government does nothing to prevent it: on the contrary, the government requires that it happen. Con Ed is a utility, you see, and is required by law to produce enough power to meet present and anticipated demands. If Luce actually placed an ad saying "Use less electricity," he could be tossed in jail.

Although corporations other than utilities are no so legally bound to provide service, the net result is the same. As things stand now, if the chairman of the board of DuPont, for example, said that effective immediately DuPont would cease producing anything that poisoned land or people in production or use, anything that was not biodegradable, and anything that required extravagant consumption of an irreplaceable resource, any shareholder could take him to court, point out that he was endangering profits and the continued existence of the company, and have him removed from office. The managers of a corporation are required by law to try to make a reasonable profit, and the law has yet to realize that contributing to the death of the earth is unreasonable.

It is the commons problem in another guise. Because the prevailing legal and political philosophy has conscientiously avoided what may be called ecological laws, the only limitation on the plunder of the earth and the poisoning of its inhabitants is the market. The market could care less about ecology, as long as there is someone to buy and someone to sell. There is, for example, a lot of gasoline sold, because there is a lot of gasoline bought. If I don't sell some gasoline to the market, someone else will. It helps me little if someone else sells that gasoline; it helps me a lot if *I* sell it. Apart from the restraints set by the (un-ecological) market in the form of costs, the only limitations on my sales of gasoline are demand and competition. If I stop to think of the consequences of what I am doing, it will only mean that someone else will do it, not that it won't be done. So I had better do while the doing is good.

Just as in the commons problem, there are two solutions. Either rigidly protect everyone's property, or rigidly protect the property of everyone. In either alternative, the rule is "Do not do to others what they would not have you do if they knew what you were doing." Or, "Do not regard others as means to your ends." Libertarians would call this forbidding coercion; socialists would call it prohibiting exploitation. It amounts to the same thing.

I dislike simplistic resolutions to complex problems, like blaming everything on the Communists or fluoridation or the CIA. In this piece I have maintained that a major share of the blame for the impending ecological disaster belongs to the notion that one may morally and legally disregard what economists call "external diseconomies"—i.e., the harmful effects of what you do on someone else. For the record, I would like to say that I think that man and the earth desperately need an ethic not only for relations between humans but also between humans and nature. In fact, I suspect that without such an ethic humans will not feel strongly enough about the violation of their rights to prevent another eco-catastrophe. But I do not think that the argument I have presented depends on this belief. A person who regards nature as infinitely malleable could still agree that we had better start recognizing each other's rights.□

"Quick! Into this catapult!"

Dennis Turner

Attempts to cure pollution through legislative fiat are worse than hopeless, the author contends. By analyzing pollution in economic terms, Dennis Turner shows that political "solutions" will only worsen things, at best only exchanging opporessors. In addition to the current situation in which we are used as cannon fodder (cancer victims) for the power plants of the industrialists, new laws and constitutional amendments also would make us into cannon fodder for the power plans of countless bureaucrats. At the same time, due to the coercive nature of the state, such laws can be expected to aggravate ecological imbalance. As Ramparts magazine recently so accurately put it, with the perfect touch of irony: "The world is dying; write your congressman today."—**ed.**

To many, pollution seems a hopelessly complex problem, beyond the grasp of anyone not totally devoted to the field—perhaps not even within the grasp of the experts. How much pollution is acceptable? To whom and for what purpose? Can the benefits of technology be weighed sensibly against the benefits of unperturbed nature? Are the doomsday predictions accurate, or panic stricken predictions of bitter men with an axe to grind?

Our senses provide our first estimate of the problem. We can smell the pollution of air in our cities, and can see the exhaust from automobiles and factories partially causing it. On smog filled days we are short of breath; our eyes burn, our clothes become sooty. And there is more. In many cities the drinking water tastes like waste from a chemical plant. On drives through the country we see wide expanses laid waste from mining, junk yards, oil stained beaches; garbage and litter, everywhere.

Everyday reading brings a second estimate. Who has not read of the species of animals become extinct in our lifetimes? Or explosions in animal populations caused by indiscriminate killing of predators? Articles on atomic radiation fill the media. Warnings of preservatives bombard us. Is our food poison? Are our resources being irrevocably depleted?

On the other hand we recognize the convenience of technology. Do we really want to desert the automobile? Most American enjoy the mobility it offers—visiting Aunt Jane on Sunday, living far from work, the trips to the ski lodge, the beach, or the mountains every other weekend.

The house we live in, the clothes we wear, the softdrinks we use, and the machines that make them all create the pollution we deplore.

The question we must ask ourselves is this: Is there some method of determining how much we gain by technology, and how much we lose by the destruction of the resources which accompanies growth in technology?

Most environmentalists have concluded that this question must be answered before a second question, concerned with seeking solutions; can be intelligently considered:

What sanctions are to be imposed to reduce pollution to acceptable levels; who should impose them, and against whom?

Government experts are usually proposed to answer the first question. Fines and injunctions, bureaucrats, and large corporations are common suggestions as answers to the second questions.

But will these answers suffice? The government's failure to solve inflation, unemployment, Vietnam, race, dissent, poverty, slums, and education should make us wary of another political solution. Federal urban renewal programs have destroyed homes for the poor; the farm program raises the price of food while undernourishment is widespread in some parts of the country. Can the same bureaucrats who designed these obvious failures be expected to do anything but fail again when given the task of saving (literally) the whole earth?

Here I begin to differ with traditional analysis of pollution. My differences will lead to unconventional and some radically different ideas for the proper cures. Not everyone suffers from an act of pollution. Any particular case of contamination is ***not*** an attack upon "society." Individuals, not "society," suffer; some individuals more than others. An example is the Santa Barbara oil spill: local residents were affected more than frequent visitors, and infrequent visitors were affected very little. Among those who live in Santa Barbara, those who watch birds and frequent the beaches were affected more than those who do not. People who live in Maine, or for that matter, Moscow, were contaminated so slightly as to have no claim to restitution.

Similarly, not everybody affected will have similar reactions. The drag racer feels less oppressed by exhaust fumes than does Ralph Nader. What consti-

tutes "contamination," then, is not intrinsic; rather, it depends on the values of those affected. Americans in 1970 feel more disturbed by gum wrappers in parks than did Americans in 1955. Japanese are more incensed by rock-painting in national monuments than Americans. A specific act of altering the environment might be considered irrelevant by one, and deleterious by another.

A successful solution must take into account these two characteristics of pollution, and provide mechanisms which satisfy potential and actual victims. Solutions which impose a one-value, across-the-board restitution will be supported by those for whom the restitution exceeds the loss, and opposed by those for whom the loss-"profits" exceed the restitution. Inevitably, some will resent others, and feel exploited. This category of solution is being proposed now; oil companies are being fined by the Federal Government—which supposedly represents all those who are affected greatly, slightly, or not at all. The solutions have only lukewarm support from those not directly affected—why should they think about it?—and heavy opposition from those directly affected?—the solution will still leave ***them*** worse off than before the oil leak. Thus the beaches remain dirty, the fines unlevied, the pumping operation inadequately corrected.

Pollution can be described by means of well-known economic analysis. Economists in the Chicago school (Milton Friedman: ***Capitalism & Freedom;*** Alchian & Allen: ***University Economics***) or the Austrian school (von Mises: ***Human Action***; Rothbard: ***Man, Economy, State***) have provided all the necessary tools.

To use a description borrowed from Murray Rothbard, technology is a recipe for rearranging natural resources to produce a desired end. An automobile is a combination of natural resources put together in a particular way, to perform a set of functions—personal motive power, among others. The rearranging of the natural resources has ***costs***. It takes time to produce the automobile, time which could have been spent elsewhere.

Human energy is required to transform the resources from their natural state to their desired state—energy that could have performed another task. And the resources themselves have cost—they could have been used either in their natural state, or could have been transformed. For example, some of the materials used to produce a refrigerator could have been used in construction of a dishwasher; similarly, a mountain which could have been used for hiking and looking at might be used for mining, to extract materials from which to produce the refrigerator.

Here is the kernel of our analysis: whether or not the costs of production—all the costs—have to be borne by the producer will influence his decision whether or not to produce. The more expensive a product is, the lower will be the demand for it. Thus fewer people are buying chuck steak at 79¢ per pound than at 39¢ per pound. The smaller the numbers of a good produced, the less rearranging of resources in their natural state the production will cause. The cost of a resource used to produce a good is defined as the most valuable alternative use to which it could be put.

Among the alternative uses to which a mountainside now used for mining could have been put is cattle grazing. But if the mountainside were steep and rocky, had little appropriate brush, and consumed large amounts of the cattles' energy to reach, its value as a grazing site might be little. And thus the mining company could purchase it from the rancher for an amount that would increase the cost of the ore little. If, to pay for the a mountainside near a city, the mining company had to outbid a home-developing company, the price of the ore would be higher, the market for it smaller. The mining company would be less likely to buy it. Thus on mountainsides near large cities we find few new mines.

The remote mountainside has an alternative use besides grazing; some people like to hike on it, and a larger number yet like to look at it. And this use has a real value—people are willing to spend their time and energy to do these things. Some people travel days to very special mountainsides.

We must find some method of providing a common denominator for the costs in time, energy and alternative uses of the physical natural resource. We haven't space here for a detailed explanation of the evolution and economic role of money as a medium of exchange. The best explanations include Rothbard, "What has government done to your money?", Hazlett, "Time Will Run Back," and von Mises, "Theory of Money and Credit."

Briefly, however, the evolution of money arises from the exchange of resources, time and energy by people to attain a desired end more efficiently. Thus if I have time and you have apple trees you grew, I might pick the apples for you, and we would in some manner divide the total picked. Common ratios for similar exchanges would inevolve; if you offer me 30 apples per 100, and elsewhere I could get 35 apples, my labor time will move towards the place where I got 35 apples.

However, the number of exchange ratios between different goods is astronomical. For a society of 15 goods, the number of exchange ratios required for two-way exchanges is 105. The total number of ratios required would be 32,768. People will tend to find a few very common articles, whose ratios with other goods are very stable, and which are generally regarded as desirable goods. Eventually one good will become the common denominator, such as gold. This we call money.

Thus the campers will be willing to pay a certain amount to use the mountainside, each hiker a smaller amount, and perhaps the lookers nothing at all, since there are many free sites, and the mountainside would be difficult to hide from view. If the value of the ore is marginal, and the site far from market, the campers and hikers could outbid the miner, or cattle grazer. The campers and hikers could bid with the cattle grazer, for rights to use the mountainside for these purposes.

In some instances the bid of the miner would still be higher than the other alternatives, and mining would occur which would damage the benefits of the resources in their natural state. But this is the method by which the perceived benefits of technology assert their control on the rate and extent of rearranging the natural resources. For any improvement in living conditions, some resources must be rearranged. If in a given condition the ultimate customers of the mine are willing to pay more for the use of the mountainside than the hikers, campers, and sightseers, this means they have committed a larger representation of time and energy than have those desiring the natural condition. The total utility of the mountainside as a mine is higher than as a camp ground and trail.

We must not forget to include another cost of production which is at present hardly every paid—pollution. What is precisely meant by contamination of

the environment? An operational definition would be that pollution is an act of rearranging the environment in such a way as to lower its value to some specific person or people. Contamination thus consists of altering a resource so as to make somebody less able to perform a desired function. However, there must be a method of sensibly comparing the lost value of the resource contaminated to the gained value of altering the resource.

Let automobiles be an example. The exhaust they produce contaminates the air while the energy they generate makes possible a far greater amount of personal motive power than would otherwise have been feasible. Both the increased motive power and the loss of the air as a source of oxygen and pleasant smells have value. Additionally the polluted air is deleterious to health—current research indicates polluted air is related to cancer, heart diseases, shortened life, loss of daily energy, and other health hazards. How shall we measure one against another?

Again, the only rational method is by determining the value of the loss in the use of the resource to the affected person, that its, what would the person suffering the pollution be willing to exchange in order to regain the preferred state of the air. Whatever he is willing to exchange can be figured in terms of a common medium of exchange, money.

If an act of polluting the air creates a condition affecting several people by decreasing the value of the air to them, the cost contamination is the sum of the amount of money that each would be willing to pay to restore the clean air.

Each of the victims has had his environment devalued by an amount determined by his preferences and proximity to the pollution. Yet he has received no compensating value from the person who benefited from the technology which caused his victimization.

As previously indicated, who must pay the costs of production influences how much production and use there will be. In a society where mechanisms existed to gain this restitution, it would be a cost of personal motive power naturally included in the decision to buy or not buy an automobile. If 1000 people were affected to the tune of $1.00 each, the automobile owner would suddenly find himself with a prohibitive cost, and far fewer people would then buy and operate automobiles in urban areas.

The potential user of personal motive power in an urban area would have a number of choices if *all* costs of rearranging resources were paid. First, the potential user could decide that the benefits to be gained from the technology were not worth the costs imposed. Second, the potential user could buy the technology and pay the victims for the contamination caused; third, the potential user could buy the technology along with a device which eliminated pollution. Presumably this would occur only if the device were less expensive than the costs of contamination. In the case of the a automobile, the driver has the following alternatives: not to buy the car, to buy it and pay damages to everyone affected, or to buy a smog device.

Let us review. There are two costs of technology which are not now being computed or paid, and are therefore not considered in controlling the allocation of resources. This is because there are no established mechanisms for determining the amount of these costs or for enforcing payment. The first is the value of a resource in its natural state to people who use it. The second is the effect which rearranging the resource has on the environment, or ecosystem. If these costs were actually paid, things would be different. In the case of an automobile, the costs of mining materials would increase, thus increasing the price of the automobile irrespective of the pollution cost. And there is the pollution caused by the factories making the automobile, and the pollution caused by using the automobile. This would increase the costs of using the automobile, an alternative being a device abating pollution, which would raise the cost either less than or equal to the pollution cost. As the cost of purchasing and using an automobile would increase, the number of automobiles in use would decrease. If a cheap device could be developed to abate automobile pollution, the use of the automobile might decrease only slightly. In either case, resources would be rearranged less drastically than they are now, and the deleterious effects of technology on the ecosystem would also be reduced. The effect that remained would be paid for. Drastic technology would be sparingly applied in heavily populated areas, as the cost would be prohibitive.

It is important to distinguish between the pollution caused by the production of a technology, and the use of a technology. An analysis which does not recognize this fact is unsatisfactory. Suppose the fallacious analysis blames only the producer of the technology. In this case measures might be taken to force the producer to install devices to abate the pollution, or to curtail use in certain populated regions. Although devices are installed before sale to the user, there is no incentive for the user to appreciate the device, as he still remains exempt from paying the cost of pollution caused by using the automobile in an uncorrected form. Thus there is no incentive to maintain the device, and law avoidance in such matters is remarkably easy. Additionally, if the user can purchase an automobile without an installed device, he will do so, to save money. A black market in uncorrected automobiles would be created. The more expensive the corrective device, the more quickly the black market would develop, and the less likely that the device would be maintained. Eventually, inspection and penalties would have to be imposed on the user; but this recognizes that pollution of production is a separate act from pollution of use.

In the event a blanket curtailment were imposed, an inequity of value would be created. Those for whom the value of the technology exceeded the cost of a corrective device or actual restitution to pollution victims would be victimized. Those who would ac actually prefer restriction to elimination of pollution wouldn't be able to make that choice. Whether with books or cars, absolute bans seldom increase the total amount of satisfaction in a community.

An ecologist might read this analysis and judge it to be myopic. "The economic analysis is correct as far as it explains discrete and definable uses for the mountainside. But the mountainside has uses in addition to those of the miner, the homedeveloper, the cattle grazer, and the hiker. It is part of an ecosystem, say one that includes the villagers in the valley below. What happens to the mountainside will affect them. How will your economic analysis ration between the needs of the village and the needs of the miner."

What could possibly determine sensibly how much contamination of the ecosystem of the village should be permitted, let alone suggest a mechanism by which this principle could be applied?

First, it is reasonable that we judge only only by what we know about the effect effect on the ecosystem of a particular use of the mountainside, and what we can predict from analogous or similar events. But we can't judge for the people in the village what values they ought to put on this knowledge and prediction. As previously mentioned, people will react differently to contamination of the environment. And the value they put on preserving the environment is meaningful only insofar the person can describe how much time and energy he is willing to use to preserve the state of the environment he prefers, there is no way of knowing how his "value" can alter his behavior. Thus we have no hard information which will be useful in suggesting mechanisms for curing the environment. The ability to describe the amount of time and energy one is willing to use will increase with knowledge of the effect of the proposed use of the mountainside on the ecosystem of the village. Later it will be argued that a mechanism can be constructed through the use of modern cost accounting methods, which will effectively determine these effects.

If those who wish to preserve the ecosystem can place a value on their desire and this value is combined with the value placed on the mountain by campers and hikers, this will be the total alternative use which the miner will have to bid against. If the value of the mountain as a campground, hiking trail and scenic wonder is slight, and the villagers feel little threat from the damage to the ecosystem, the miner might still find the production cost of ore will not increase sufficiently to prevent him from purchasing the mountainside. The total value to the miner depends on how much consumers are willing to pay for the end product of the mined ore. Thus the mountainside might still have more total value as a mine than in its natural state, even when the measurable effect of the mine on the ecosystem is included.

On the other hand, with improved methods of determining ecosystem damage, it is likely that people would feel far more of a threat, and would value preservation or only minor modification more highly than they have in the past. With social mechanisms for expressing and using this value, technological uses might decrease tremendously. This would be a method of making the producer consider all the costs when deciding whether or not to produce a product. Since the costs involved in each decision will be higher, as heretofore they have, existed no mechanisms through which the cost of pollution was determined and levied, the decision to alter the environment will be made less frequently, less drastically so.

But our problem is not yet solved. Even if this economic analysis is applicable to contamination of the ecosystem, it is explanatory rather than prescriptive. We still need to construct a mechanism for allocating resources intelligently.

We will consider this problem from two viewpoints. First, tracing the approach by which a state attacks pollution, we will find that institutional barriers tend to prevent us from making those distinctions about cause and extent of contamination which are needed for a successful solution. The mechanisms needed to make these selections are unnatural to state apparatus; it is not in the interest of either bureaucrats or bureaucracy to construct them.

Second, we will discover the correcting mechanisms would arise from the nature of the ecosystem, of which man is a part. It will be in the self-interest of free men to construct these mechanisms.

Lastly, the problem of obtaining reliable information regarding the effects of contamination on the ecosystem, and the cost of corrective devices and direct restitution, will be mentioned throughout the discussion.

Businessmen don't like competitors; nor are they happy about a substitute good appearing on the market. The truckers and railways are not what could be described as best of friends, and the steel producers abhorred the rise of the aluminum companies, even as business machine companies hated the entrance of the computer.

This negative reaction can be expected in any human domain. In each case the newcomer is a threat to the established business. It is not because the aluminum business was new that the steel makers had trepidations; it is because the aluminum business was a threat to the existence of the steel company. Whenever someone performs a particular function, he identifies with that function, and received from it a sense of identity. When an alternative institution initiates another method of performing that function, the first feels a threat to identity.

Bureaucrats are no different from businessmen in this respect. As a part of the State, they identify with a certain method of controlling or "helping" people. Any alternative method will be perceived as a threat, and a threat which removes control from the bureaucrat is a very dangerous threat indeed. Under free trade, with independent capital accumulation, human energy, and time, no one authority allocates resources. Thus an aluminum company need not request permission from the steel company to initiate production. On the other hand, under the state, there exists a central authority for allocating resources. For a bureaucrat to establish an alternative procedure, he must receive permission from other bureaucrats who have a vested interest in the current methodology to a greater or lesser extent. That chief bureaucrat must consider his own relationships with all who would be affected by the new procedure, including those whose functions would be reduced or eliminated.

There is usually a large disincentive for initiating new procedure. The opposition to change is always larger than the support, because the established procedure almost invariably has more people identified with it.

Alternative methods which increase the bureaucrat's power have a good chance to be executed. If the established procedure is failing, pressure from distant parts of the bureaucracy, or from revolt of the controlled people will make change which satisfies the bureaucrats desirable. The need of modifying identity will be compensated by an increased feeling of importance when the modification is complete.

The natural processes of bureaucratic structure, then, avoids changes if at all possible, but among those which occur, they select away from those that increase it. Notice the aluminum company need not modify its proposal in any way to please the owners of the steel company (under free trade). But only one type of solution will be satisfactory to bureaucrats.

The state has always preempted the fields of restitution, enforcement, and control of the environment in the United States. Laws against polluting waterways have been on the books for 90 years; rewards were legislated for detecting violators. Mandatory $2,500 per day fines were to be imposed.

Most of the land in the western part of the country is owned by various levels of the state. In Nevada 96% of the land is owned by the federal government. In providing camping, hiking, and scenery to interested parties at either zero or nominal cost, the state has preempted alternatives, none of which can compete with the state subsidies. Permission of the state must be sought to build dams, to mine, to build homes, to build resorts, to hike or camp, the beaches in most places are owned by the state, as are the national parks, and mountain ranges. Sites of oil production must be approved by the state; in many areas the amount of production must be approved. Off-shore oil drilling, safety procedures, and all associated activity need be approved by the state.

The state controls traditional restitution procedures — through the courts, the prosecutors, the laws, the politicians who decide the allocation of resources. The courts or administrative agencies decide what contamination requires restitution, who should pay it, who should receive it. The ecosystem has been primarily in the hands of the state for 100 years; the failures are theirs. Can we trust them to correct their errors? Or is the error in the structure itself?

The bureaucrat, like every other person, seeks to control his surroundings; this way he can predict the future, and be secure. He will act in such a manner as to maintain and extend this control. When choosing courses of action to solve the ecology problems he will opt for those in his interest, that is, those course of action which increase his control of his surroundings. In this he is no different from the scientist, the artist, the businessman, the student.

When the amount of contamination was lower, and the information on the amount of damage it causes less developed, voters generally preferred additional technological goods to the natural goods. Conservation groups were among the few who stood in the way of the bulldozers. Compared with issures of inflation, war, race, education, the issue was unimportant to most voters. When they did disapprove of particular rearrangements of resources, this disapproval weighed only slightly in their selection of candidates for whom to vote. The state did not concern itself with the issue; only the conservation groups and the rearrangement interests allowed their behavior towards the bureaucrats to be altered by this issue. The oil companies (and their employees) donated more money to campaigns, and bribed them much better than did the conservation groups. As voters were concerned with gross national product and not "quality of life," the bureaucrat extended his control by selecting for technology, not nature.

As new data began to suggest that the threat to existence from contamination was large, that the amount of contamination was astounding, that pollution had become a threat to health, voters became concerned enough with the issue to alter their behavior towards the bureaucracy. At that point when the behavior of the voters could be more damaging than the behavior of the oil companies and automobile manufacturers, and when voters became as concerned with contamination as with gross national product, the bureaucracy began to adjust itself to the new power relationship, finding it can enhance its control by appealing to the voters' desire for more natural goods relative to technological goods. To do so two types of action may be employed: Actually provide for decontamination; or impose penalties which will arouse minimum resentment among the voters.

So, suddenly the corporations, which had previously paid none of the costs of contamination, must pay all the costs of contamination. Determination of differentials, so crucial to a just solution to contamination, is outside the scope of political action.

The most common technique of the state is to blame a small group of people, and act as "protector" of a more powerful group of people against "exploitation." By this method the bureaucracy increases it power to justify the change of procedure. The solution must be uniform; if each person were permitted to calculate his own loss loss by contamination, and the violators add corrective devices, abate production, or provide direct restitution, the state would not have increased its power. There is no incentive for a bureaucracy to admit to a problem and attempt solution except to increase its power, even as there is no incentive for a businessman to change his procedure or manufacture a new product except to increase his profits.

The state itself is one of the worst contaminators of the environment. Have you heard what the U. S. Navy is doing to the bays in San Francisco and San Diego? And in New York City the only industries not meeting the anti-contamination requirements are the city owned power and water plants. The Army regularly contaminates large areas with nuclear tests (in spite of protests throughout Nevada) and chemical and biological warfare tests. There is no incentive to cease this pollution. First, abatement costs money, meaning increased taxes, which causes friction with the voters. Only when voters find pollution more oppressive than taxes will the U. S. government consider decontaminating its own resources. Second, decontamination requires change of procedure without increase in state power; there exists no incentive for such a change of procedure. This is important; the more the resources are directly controlled by the state, the more difficult will be decontamination. When resources are largely in private hands, the bureaucracy increases power by enforcing decontamination. When the resources are in state hands, the bureaucracy loses power by decontamination, by causing friction through increased taxes.

There is no incentive for the state to provide solutions with differentials. They will only do so when the cost in power of failing to do so will be greater than the cost in power of doing so. Compensation for those most directly affected requires an admission that the contamination was not a crime against society, but against individuals: this decreases the role of the state as protector of the oppressed voters. It costs the bureaucrats power they could otherwise assume.

Additionally, differential restitution provides funds directly to individuals; average compensation provides funds (in the form of fines) to the general fund, to be dispersed as the state finds conducive to increasing its power. For example, a Federal Grant to clean the beaches of Santa Barbara enchances the role of the state as protector. But the cleaning does not have to satisfy the users. It is more important that all the taxpayers be informed of the use of the funds. The grant is constructed not to rectify the damage, but to maximize the power of the state, by construction an image as protector.

Differentials will only be provided when when the particular damage is so severe and definable that the protest by those affected will exceed the pos-

sible increase in power by general solutions. Thus in the case of Santa Barbara beaches the state might act. But not on auto pollution. Those who live in ghettos near main highways will receive no more restitution than those living in the protected hills of a wealthy suburb. The solutions will always be opposed by those finding the cost of the solution greater than the cost of the contamination. Most contamination is in this category – only certain people directly affected, usually by proximity, find the cost of the contamination higher than the cost of the solution. Each solution increases the size of the state, and requires more resources to be allocated to the state. The resources allocated to the state itself cause contamination of the environment; but but the state has a disincentive for decontaminating these.

The state is not the agency to solve contamination. Nowhere in its structure is there to be found a method for sensibly determining the amount of the contamination, for compensating those most affected, and for providing a solution which itself does not cause social friction.

But are there spontaneous forces of the ecosystem that would permit just solutions of the contamination? Every organism seeks equilibrium with its environment. There is a particular arrangement of the environment that will prove most satisfactory to the organism. Organisms without memory and reason will migrate to environments most suitable to their capacities. A lion placed on a craggy mountain won't stay there; he will return to the African plain. An insect placed in the water will attempt to escape and fly to the bushes.

An organism with memory and reason can change his environment. A human being can do two things to attain equilibrium – he can migrate to more hospitable surroundings, or rearrange the environment. For any level of data, that is, for any given state of technology, there is a unique arrangement of resources that will satisfy a particular human being the most. He will consider all costs of moving; in winter the choice might be repairing the heater as opposed to vacationing in Miami. As a human being most normally alter his environment in order to survive, those human beings disposed towards seeking equilibrium were those that best survived and reproduced. Thus natural selection has determined that homo sapien, as with all other organisms, seeks equilibrium.

As each rearrangement of resources will have a cost in time, energy, and lost value of the resources in their natural state, homo sapiens will not always choose to rearrange his resources. Costs of rearrangement and lost value of the natural state will cause the person to limit the rearrangement of resources for any given level of technology. For a given technology, every given rearrangement causes an increasing decline in the value of the natural ecosystem. At some point additional rearrangement will produce an increase in satisfaction so small that it will not justify the loss of natural value. At that point man will stop using the technology. Always in search of a more satisfactory use of the environment, man will be forced to improve improve his technology, either to provide devices that mitigate the contamination and make more efficient use of the resources in their natural state, or to provide new recipes that do not cause as much contamination. If no state exists to permit avoidance of the costs of contamination, the search for improved technology is stronger, begins earlier, than when the State interferes.

Technology would develop sooner; because the costs of any given level of rearrangement would be higher than currently; any given level of technology would cause a smaller amount of rearranged resources and any level of rearranged resources would require a more advanced technology. There would exist positive incentive to develop rectification of contamination simultaneously with the product causing it. Until recent ecology publicity, under dominance of the state, there was little incentive to develop contamination-rectifying or preventing technology. In a free society, however, incentive to develop accurate data on the effect of any proposed technology on the resources and ecosystems would exist; any catastrophe or gross miscalculation would destroy the existence of the producing agency – the costs would exceed the assets of the agency in many cases and cause it to be liquidated. If all costs had to be paid, data indicating the effects of technology would develop simultaneously with the technology itself; both would be part of the same package. Their separation is due only to the state specifically allowing pollutors to pass off pollution costs on unwilling or unknowing victims.

How would payment of the costs be enforced? No differently than payment of bills is now enforced. Companies which don't pay their bills lose their credit and reputation. Confiscation of assets, proceedings against those in charge, and boycotts all serve presently to insure usually payment of costs. Ecocontamination is another cost. Including it within the scope of economic analysis is a first step toward the evolution of agencies specifically functioning as contamination rectifiers and contamination preventers. These would facilitate resolving the problem consistent with a free society.

What are examples of agencies which could develop without the specific permission of the state, which is not likely to abdicate its power in the field of ecology?

The time is ripe for a Clean Air and Water Union, for example. People woul would join, pay dues, and the union would function to persuade polluting agencies to cease their attacks on threat of widespread bad publicity, boycott of their products, and fillibustering at stockholder's meetings. Civil rights groups have used this method to force desegregation of some companies (notably U.S. Steel) with less bloodshed, resentment, and effort than state methods.

Companies could be persuaded to sign a non-contamination treaty with the Union or other agencies. Those that did would be recommended to the membership and the general public; those that did not could be boycotted.

The Union could contract with aggrieved individuals to gain restitution for specific acts of contamination; companies that pollute, people with smoky automobiles, housewives who allow their dogs to defecate on other people's lawns, could all be persuaded with a small amount of bad publicity to cease and desist. Companies could receive special recommendation for promising not to deal with other companies which are notable contaminators.

Notice this method only works when competition exists: they will not work in persuading the state to decontaminate. Perhaps, though, a Tax-strike might. If 25,000 San Diego residents refused to pay taxes until the Navy decontaminated, it would shake the bureaucracy.

It was not the state, after all, which invented the computer, the radio, game

(continued on the next page)

editor's notes

This is our first attempt to coordinate an issue around a single topic and, while congratulations are in order for those who helped make it possible, an apology must be made to readers for some overlapping of material and a certain lack of continuity between articles, as well as at least one important ommission, ecotactics. Our planning sessions, finances, and resources just weren't what they should have been. I promise to make the next team effort—education—better. Meanwhile, as additional material on ecology arrives, we will run it. Certainly I expect a barrage of letters, judging from the reactions on the telephone of readers when I told them what we were planning. Several late manuscripts including one by Leon Kapersky, publisher of Protos, on recycling are expected. And we'd be happy to see formal rebuttals to anything published here.

What is planned for the next few months in Reason? A special issue on education with an interview with John Holt, material on and by Minsky and Papert of MIT's artificial intelligence lab, and much more. An editorial on the ethics of advertising; the ethics of transplant; Rosalee Nichols on indian rights; Lynn Kinsky on drugs and federal regulation; an interview with Jay Forrester (tentative); Roy Childs on Big Business (tentative); myself on press objectivity and police efficiency; Don Franzen on the New Left; Robert Poole on comparative political trends in America and Eastern Europe and the need for anthropological approach to social change.

I've been asked to contribute to the Libertarian Forum (not the magazine), a series of tapes slated for distribution throughout the Pacifica network.

Small school groups may find of use cassettes I am recording on a variety of subjects. Generally, the material on the cassettes has not yet appeared in Reason. Some topics: police brutality, efficiency, authoritarianism; press objectivity. I haven't decided on a price for use or purchase, although it won't be very high.

Add to our staff, Rod Manis, who begins this month as advisor in eco-economics.

When I was at the California conference this winter, I heard a method of fighting the draft that I've neglected to pass on: a draft card bank, along the lines of Census Resistance 70. A large number of kids, say 25 thousand, would mail their draft card to preselected address or box number. When a specified number had arrived, they would be crated and shipped air freight to the Justice Dept. The theory is that the Justice Dept. couldn't possibly prosecute 25,000 draft resisters, only a small number. If donations were included with the draft cards, there would be plenty of money for legal defense or escape to Canada. Once the publicity began, you could expect a great flood of additional cards. Pretty soon, the only ones who will have not shipped their cards back to Mitchell will be William Buckley and the directors of National YAF.

Virginia Heinlein informs us that her husband's next book, I Will Fear No Evil, will be released this fall by Putnam and serialized by Galaxy. I have no idea what the book is about. No matter what, though, it should be interesting.

Continued from the previous page

theory, cost accounting, or the acoustic guitar. They were invented by individuals who stood to gain by their invention. The state can only regulate what already exists. Corrective technology does not yet exist - the state cannot cause it to be produced. Only we can. By acting on our own.□

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matters being brought up by environmentalists: fish kills, plankton slaughter, water table pollution, food chain alterations, etc.

Property rights, I believe, if they are to mean anything at all, must be framed in the context of the most advanced understanding of ecological processes.—*ed.*

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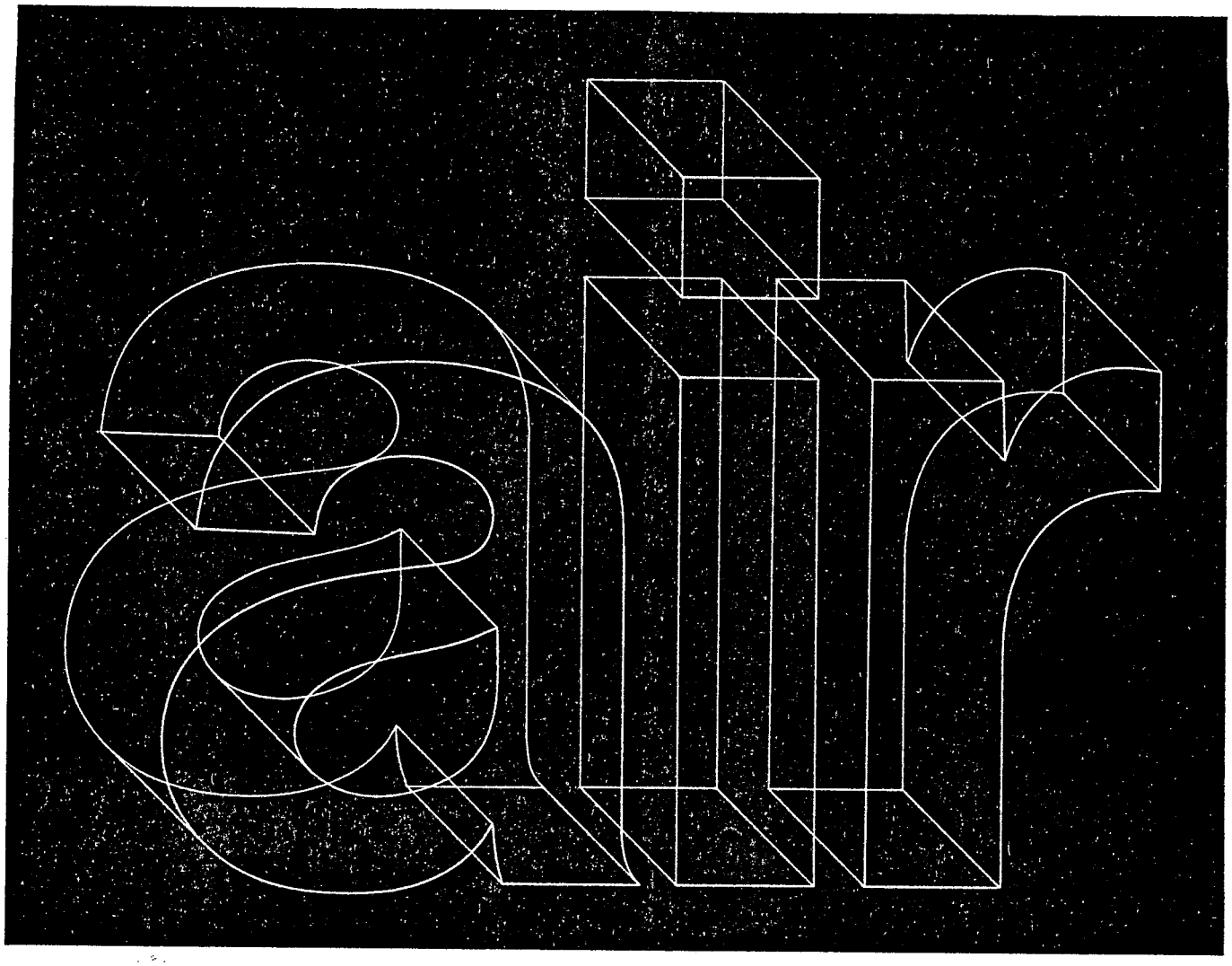
sir

Who Owns It?

James Weigl

A resource can become private property if the owner uses the resource and transforms it through human knowledge and effort into another entity of value to him. Essentially, what he owns is the product of his work—he may use the previously unowned resource as an ingredient in the final product, but he owns only the final product—that which he has created by his own effort.

Examples:

1

A man owns a farm—the result of his productive efforts at cultivation, irrigation, harvesting, etc. The farm's existence is only possible given the existence of the land, so the land has become an integral part of the new entity called the farm, and as such belongs to the farmer. He does not own the land just because he was the first one to say "I claim it," but because it is now part of a new entity which he produced.

2

A man owns a tank of compressed air which he obtained by pumping atmospheric air into the tank. The atmospheric air is a resource which he used in producing the new entity ("tank of compressed air"). He did not own the air in its free state, but he owns the product of the resource and his effort.

3

A man owns an airplane "corridor" between two cities. He does not own the whole sky, but he can own what he has created with part of the sky—in this case a carefully outlined and monitored corridor in which planes can fly safely and efficiently from one city to the other.

4

A man owns an ornament he made from a piece of driftwood he found on the beach. In this case his only effort was to move the driftwood into his house, but he has still created another entity, an ornament, from a resource. He has moved the resource to a place of higher value and can own the product of the resource and his effort.

5

A man owns a 2x8 board he cut from a tree. He didn't own the previously unowned tree until he converted it into a board.

6

A man visits Antarctica (assume for the time being it is unowned). He decided to make 3,000 acres of it into a game refuge and park because of its extreme beauty. He can now own this park, which is comprised of the land plus the results of his efforts at making it accessible, attractive, ecologically stable, etc.

How can this principle be used to delineate whether pollution of a resource amounts to a violation of property rights?

If a person allows a substance he has made with a resource or a product bought from another to travel accidently or on purpose to the person or property of another causing harm to that person, he should be held responsible for the damage and compensate the other person for his loss. Whether the polluter personally delivers the damaging substance or lets it be carried by natural forces, it still represents the initiation of force against the aggrieved party.

If a person allows a substance to travel to a previously unowned resource, thereby destroying or damaging that resource, he is not liable to anyone since no individual property rights have been violated. However, if the resource is later claimed, the polluter would then be responsible for any ***further*** damage to the now-owned resource.

Going one step further, a person who implicitly depended on the continued existence of the unpolluted resource discussed above, but did not take the effort to own that resource, would simply be out of luck (literally) if that resource became polluted. Although he used natural products of the resource (which he assumed would be continually available), he did not own these products until he used them in his work. Their destruction before the time when he can use them therefore does not violate his property rights.

Applying this to air pollution, it can be seen that air in general today is an unowned and uncontrolled resource. When a person deliberately transforms it by cooling, heating, compressing, or purifying it, he owns it. It is that product which from that time forward must not be polluted and damaged. Free air—uncontained and completely under control of natural forces belongs to no one, and so polluting it cannot be construed as destroying someone's property.

There is a sense, however, in which pollution of a resource does violate rights. If the pollution by itself or under the influences of natural transporting forces causes damage to life or property, a liability is incurred as earlier mentioned. If the polluted resource is used in such a way as not to establish ownership it is the user's worry. This, because those who use the polluted resource never had a right to expect that the unowned

resource (clean air, clean water, etc.) would be available free, forever. Clean air would then most likely be available, but at some real cost (to pay for filtering, etc.). When a person uses an unowned resource, he does so at his own risk; he may take what's there, but he cannot demand that he be provided with exactly what he needs. He has made no contracts with other men to insure the delivery of what he needs, and so cannot hold other men responsible.

I will now cite a couple of examples to show how these concepts could be applied to today's problems.

automotive pollution

Automobile owners would be liable for all damages directly caused by the pollution of the engines. A scale of damages vs. the amount of pollutants emitted would probably be set up when citizens were allowed to sue drivers for contributing to disease caused by smog, e.g. eye-burning, cancer, respiratory disease, skin disease. Both civil and criminal suits could be brought against automobile operators, airlines, trucking firms, etc., for real property damage such as blackening of houses, dirtying of office buildings, corrosion of materials, etc. Damages would be awarded to the extent the problem was caused by pollution, and would be paid by those emitting the destructive pollutants. There would soon be a race, I predict, among auto manufacturers to develop non-polluting equipment.

Operating costs for automobiles, trucks, etc., would then reflect the real cost of operation since they would be borne solely by owners and operators. Currently part of the cost is being forcibly extracted from innocent people in the form of bodily and property damage.

Note that if there should come a time when oxygen concentrations in cities should fail because of high usage, no damages could be awarded to those people unable to function successfully on account of it. There is no guarantee that an unowned resource will last forever in specific concentrations. Damages could, however, be levied on persons producing pollutants such as excess CO_2 (over that amount normally contained in the atmosphere) if those pollutants caused damage. Incidentally, as oxygen became a scare resource it would became a saleable commodity and sold at a price just like other scarce commodities (such as spring water, beef, vegetables and penicillin today). Perhaps cities would be covered over with domes and their atmospheres carefully controlled by individuals who would then sell to the occupants the air they needed at the purity levels they desired (for a profit of course), perhaps even at the temperatures which would be more inviting to potential occupants. In such a city uncontrolled pollution would cease to be a problem, because pollution of anything but the air a customer bought would represent an obvious violation of the atmosphere-owner's rights to his property (the rest of the contained atmosphere).

river pollution

Water polluters would be essentially free to pollute unowned water as long as their pollutants did ***not*** seep into other people's property, causing damage. From a practical standpoint, though, it would be a very risky business to pollute (air or water) because of the lack of control one has over where the pollutants go. At present natural forces are very powerful relative to those capable to man, and are also relatively unpredictable. The myriad of suits the polluter would be subject to for damages such as to crops on nearby farms and fish kills would represent strong deterrence (if he hadn't scruples about killing fish and food). In the case of rivers, if property rights were correctly identified to include the riverbed plus the water contained therein, this problem wouldn't even come up. River edge polluters would be damaging the river-owner's property and would have to pay him compensation (or stop). Since there would be tremendous capital tied up in the river, the owner would be forced to think not only of immediate profits but also of the ***future*** value of his investment: is a polluted river ever as valuable as a clean one?

I maintain that the problem of pollution is one essentially of the social/political system not having adequately identified and protected property rights. Crucially needed today is the proper definition of property rights with regard to natural resources—something which has been dealt with dismally by the present system of government-by-edict. The present trend in government to allow each person "his share" of pollution into air or water is not only arbitrary, but also impractical and grossly unfair to the persons hurt by the pollution.

I'm hoping that this general discussion of resources, property rights, and pollution will spark some rational thinking on the issues. □

a friend in deed: notes on how private property is going to save the earth and all like that

Mr. Weigl is wrong. He is perhaps correct in general emphasis but wrong in particulars and applications. Sure, cultural recognition that property is a necessary and desirable state of affairs would represent the major step towards achieving ecological stability, but on the basis of the limited material available concerning what constitutes true property we can expect not only continuing warfare waged on the biosphere, but endless battles among men (just like today). I'll admit to not having done the required research to see what the most advanced studies in criteria of ownership have to say (and I invite readers to send me anything they might have come across), but I think I'm safe in saying that Mr. Weigl's analysis represents about the general level of ecological finesse in the libertarian movement. Well, libertarianism deserves a better defense than this. If Murray Rothbard's woefully inadequate ecology article in the February issue of the ***Individualist*** is any indication of the level of scholarly inquiry on the subject, we're in trouble.

Starting off as it does with a reminder how America is ruled by anti-intellectual fads, one might think the doctor means to deny that a ghastly quantity of non-self-destructing herbicides, pesticides, and fertilizers is collecting in America's water tables where it will slowly seep towards the sea and its delicate covering of plankton. I hope not; garbage in the streets is decidedly not what the sensible among the environmentalists are concerned about. Easy enough to knock the anti-technology freaks; their case is all wind and hatred and confusion. But what about the ecologists' more central consideration—that the (present) need for a properly functioning biosphere makes essential some system that will prevent men from acting in such ways that upset the balance, regardless of whether or not the materials they manipulate are their "property" or not.

What I wish to know—and welcome letters to the editor and articles on the subject—is this: what do we mean by the term "property." What are the criteria for ownership, with particular notice to be placed on the fact that nearly everything on the globe has been "owned" (claimed) at least once and that much of the current distribution of natural resources is the result

of extensive theft. (In other words, "first come, first served" is not sufficient enough a principle to answer the question.) If I "own" a forest, do I have the right to cut down my trees even if this will alter the watershed and destroy my neighbor's corn crop? If I don't have such a right, then can it truly be said that I "own" the forest, or should it be said that I actually own certain *aspects* of that forest and thus derive the right to use the forest only in ways that do not violate the rights of others? Most environmentalists seem to make the case against property through confusions such as this one, and it behooves the libertarians in the ecology movement to set the issue straight. No one else in America has the Austrian economics background to do it.

Changing the watershed running over my neighbor's land is almost analogous to my shooting him with a pistol. Only the weapon is different. Non-libertarian ecologists seem to be saying that since my gun can be used for harm, I shouldn't be permitted unqualified ownership, as if ownership somehow included the right to indiscriminately kill. Ridiculous.

According to the coercive environmentalists, laws should be passed so that the community can restrict the actions of individuals with regard to their property, as if the "community" could somehow be trusted to be more sensible than the individuals comprising it. (The opposite is empirically the case.)

Well, the only difference between the gun and the forest is that one isn't (usually) manufactured—a forest grows wild. But this doesn't change the issue, I believe.

Now to Mr. Weigl's contentions about ownership of the air. I can show some flaws—or at least problems— in his analysis.

Libertarians have developed two ways to view air in discussions: first as a medium in which transgressions occur (ownership is largely irrelevent); second, as a material for which property claims must be established before any meaningful discourse of transgressions can take place.

Let's explore each of these. As Robert Poole points out in his feature article, it hardly matters whether you kill a man with lead particles a quarter of an inch in diameter (bullets) or ones a mere molecule in diameter (leaded gasoline fumes). The effect, in ultimate terms, is the same: death. It should be noted, though, that ownership of the air is still not irrelevent. If I choose to accept work in a mine that extracts cartheogenic materials it is my worry if I contract disease. The air in the mine shaft is presumably the mine owner's, to do with as he pleases, and therefore filling it with poisons is not wrong, so long as no one is forced to work down there (and even *then* the evil is not the poison, but the force).

For another example where ownership of the air (or, rather, a physical space someplace above the surface of the earth, defined by latitude, longitude, and altitude) would determine whether or not a transgression has occured, take flight paths. If it is legitimate to claim ownership and prohibit unauthorized entry and usage, then if I were to fly my lightplane into the glidepath of the local jetport and was then subjected to jetwake and crashed, it would have been my own fault. I, not the pilot of the jetliner, was the aggressor.

So, it seems that while the view of air as a medium of aggression is useful, it is not always sufficient. The view of the air as an economic commodity, while itself not enough alone, appears necessary to complete the analysis.

Let's play with Mr. Weigl's criteria for ownership of the air for a bit and see what happens. He says: "When a person deliberately transforms it by heating, cooling, compressing, or purifying, he owns it." Such as breathing? Does Mr. Weigl contend that the first man to breath many years ago became owner of the atmosphere? He altered its chemical composition in only a very small way, but he did alter it. More CO_2, water vapor, and heat.

Consider the contradiction in Mr. Weigl's notions. On one hand, he claims that men are morally free to pollute (i.e., alter) natural resources unowned by others; yet on the other hand, he claims such alteration represents the basis for a claim to ownership, indeed that such alteration *is* ownership.

Part of the responsibility of ownership includes that of seeing that one's property, which metaphorically becomes an extention of self, does not injure others. If you claim ownership of a rock perched at the top of a cliff overlooking a mountain pass, its now your responsibility to see that it doesn't fall off.

The same principle should apply to owned gases—shouldn't it? People aren't supposed to abandon their cars just ***anywhere***. Either they sell them to a junk dealer (and the responsibility becomes his) or they discard them somewhere way out in the woods where they can cause no one harm. Now how about gases (or suspended particles) which, even though they will disperse, may still reach relatively high concentrations in areas of heavy emission (city auto pollution), or may be reconcentrated by the food chain?

Mr. Weigl says we are free to breathe all the air we like but we shouldn't expect, say, the oxygen percentage to remain at its present level. We don't own the oxygen, so we can't demand that others refrain from using it, his argument goes. But in as much as most of the major uses of oxygen I know of convert the element by connecting it to other elements in usually toxic compounds (CO_2, SO_2, etc.), his distinction seems a pointless one. If oxygen concentration (percentage) ever does show marked decrease on a global scale, it certainly won't be only because there is less oxygen, but because some other gas is being generated and released to the atmosphere.

By Mr. Weigl's conceptions of property rights, the fact that billions of men have have breathed the air for how ever many thousands of years does not constitute sufficient basis for a valid claim to ownership. Let's take that contention and another one—that alteration is ownership—to their logical extreme. Suppose I developed a super-super bomb of a very unusual nature, one that in detonation consumed all the plant's oxygen instantaneously. Just suppose that.

Would it be okay for me to set off the bomb? By Mr. Weigl's conceptions, the answer would be yes. (Correct me if I've misinterpreted you, Jim, won't you?) The only difference between my example and the ones Mr. Weigl probably has in mind is the time elapsed. Am I wrong in assuming that this factor (time) is irrelevent in the working of the (so called) moral principle involved?

What I'd like to know is this: is it possible that Mr. Weigl has overlooked some important principle of communal or implicit ownership (or whatever)? The question is extremely important for it is applicable to a broad range of

Continued on page 26

of injustice caused by the violating of one human right cannot in itself cause an injustice—or a "more serious form of injustice" (my italics)—to be perpetrated against another human right.

Near the end of the paper, Mr. Machan discusses the draft. He states, in part:

"Of course, some decisions and acts [of the draftee], once the limits of decision-making have been set by law, are the draftee's own. It would, therefore, be false to hold that he was responsible for nothing. (p. 12)"

But, two sentences later he states that the determination of responsibility—"the linking of cause and effect in human action"—is an impossibility, due to conscription. Which is to say that the draftee is responsible for some things (the first quotation), but no one can determine what they are (the second quotation). Then how can Mr. Machan write that the draftee is responsible for *some thing(s)?—if no one knows* what these things are. Or, what makes Mr. Machan write the first statement? Why does he feel that the draftee is responsible for some thing(s)—while intellectually, he has arrived at the conclusion that no one can point out such areas of justifiable responsibility?

An answer to that question will reveal further contradictions in his paper.

Next:
"The Cops: Heros or Villains; (Lanny Friedlander)

"If, in order to achieve a free society, men must be rational, once established, that society tends to provide continuing economic incentives toward rationality. (p. 6)(my italics)

"If one assumes a cultural context in which men do choose to exercise rationality. . . .(p.6)"

With statements that begin with the above, what must be scrutinized is that *which follows such statements.* For there is the tendency to predicate rationality as the given, which subsequently serves to justify some proposition, such as a new police system. Rationality should not even be implied as a given. As noted by the word "choose" in the quotation, to be rational during a span of time means to choose to be rational during that time. The tendency to forget this, leads to the last phrase of the following three: 1. If men choose to be rational. . . 2. If men are rational. . 3. In a rational society. . . .
Thus, we can easily end up with the fantasy: In a rational society, the policeman on the beat would not be necessary; therefore—. . . .

". .even police work is just a service, like insurance or fire protection. (p.4, my italics)"

The connotation of the italicized phrase should make one stop and question: Shooting down a sniper by the police—is that just a service?—retaliation against the (suspected) initiation of *force—is that just a service?—the maintaining* of the peace and the law—is that just a service, like insurance or fire protection? In the moral-legal sense, the maintaining of the peace and the enforcement of law are not "just a service, like insurance or fire protection." And the police, as part of the method by which law is enforced, do not represent or symbolize "just a service."

"[Since] the laws of a mixed economy [including the 'laws of a seemingly admirable quality'] are perverted by a penal system that concentrates, not on restitution to the victim, but on 'punishment' of the criminals, justice is not served, rights are not protected. (p. 6)"

Before you can say that justice is not served, you have to identify explicitly what you mean by "justice," and thereby indicate in what manner "rights are not protected."

And what is the difference between *"restitution" and "punishment"*? consider the following: The restitution of actual value (plus interest and court charges) destroyed by the offender—in the way that you have written it—merely focuses on the monetary paying back of such, and does not focus on the fact that a right has been violated, and that it is the violation of this right which the rational law adjudicates. In other words, it is first whether a theft has been committed, and second what the nature of the theft is, that the rational court considers. But what you imply is merely of the order of a loan having been taken out, which must now be called—or the collection of insurance as per service, or the putting out of a fire by the fire department. At least the concept of "punishment" does at least imply a link to, or a consequence of, willfull violation of right(s), over and above any monetary restitution.

"So long as men thought there was sufficient gain to be had by preventing some particular sort of crime or prosecuting some particular criminal, *they would do so.*" (p.7)

If the "or" in the quotation is supposed to mean "that is," then in effect you are saying this if some men thought there was no sufficient gain, they would not bother to do anything about the crime: that is, they would in effect be sanctioning the crime. But let us just focus only on the last phrase—of men *finding it profitable to prosecute* some particular criminal.

If it is profitable to prosecute a particular criminal, we may then go back one step in our reasoning and say that the crime he committed was a "profit yielding" action to the victim (see quotation). Thus that particular type of crime becomes a value to the "victim," because it yields a good "profit." This type of situation would act as a further incentive for the thinking behind the human being who burns down his own house, and then calls on the service of the insurance company (to pay up)—except now, he *would further call on Crime Inc.* to frame someone, and then finally he would call on the "service" of the police to grab that someone, in order that he might accrue a net profit, less a pay off of 5% to Crime, Inc. and 10% to the police: that particular crime might be well worth the risk, according to that type of thinking.

". . .*no social structure can supersede* the laws of supply and demand." (p. 7)

And the demand is for crimes yielding a good profit to the "victim," and the supply is met by Crime, Inc., who have the police on the payroll and whose motto is "Frame-Up Guaranteed."

"In a free society, every act of coercion. . .would be a source of potential profit for honest men [what about dishonest men?]" (p. 7)

If we have criminals and false arrests now, do you think that the occurence *of such would decrease if, for example,* false arrest became a profitable "business"? And two sentences later, you write:

"[Thus, this potential profit is] one way in which the elimination of specific acts of criminality would tend

letters to the editor

Dear Sir:
I would like to reply to your editorial comments in the December, 1969 issue of Reason, concerning the growing up of rock music.

That issue was the first of your magazine that I have read, and, being a student of Objectivism, I am glad to see a work such as yours being published.

I can appreciate your enthusiasm at seeing the intrusion of rationality, in the form of classical music, into rock music; but I must take issue with what you choose to regard as a good sign.

I have not heard any of the selections you listed in your "Editor's Notes," and can only recall one use of pre-twentieth century music in a rock composition: a Bach horn fanfare in the Beatle's "Penny Lane." Aside from lifting this bit complete, the only other methods I can see of how a "fusion of rock, jazz, and classical" can take place are (1) to take a melody from one source and harmonize and/or orchestrate it differently for another set of instruments, (2) borrow certain orchestration styles which belong uniquely to one composer and adapt them to a melody of one's own choosing, or (3) to imitate the dynamics of a composer's harmony—in other words, to fragment an artwork, or even an artstyle, and reassemble the parts into something of one's own whim. When this was projected into a work of fiction concerning the fragmenting of a human body, the Frankenstein monster was the result.

Think of what would happen if similar license were to be taken in other art forms: the ceiling of the Sistine Chapel rendered in pointillism; King Lear newly presented as a broadway musical; a copy of Taliesin West constructed in a cold, wet climate; Atlas Shrugged as a Reader's Digest condensed book; Swan Lake performed, not by dancers, but by choreography plots flashed as diagrams on a screen at appropriate points in the music. This, in essence, is what fusing a finished work of art with something else will amount to.

It is self-defeating to fragment complete works of music, because doing so distorts some element of the composer's idea by dropping its context. The composers themselves were certainly most aware of the capabilities of the media for which they wrote. Beethoven did not write the same melodies and harmonies for his piano sonatas as for his string quartets. His string quartets do not attempt the complex layers of sound constructed for his symphonies. His symphonies and overtures were both scored for orchestra, but the intent of each is enough to place them in separate categories.

Modern classical musicians are now very aware of such distinctions. Bach is no longer performed with a Wagnerian orchestra (and Wagner would sound ridiculous played on Baroque instruments); orchestrations of pianoworks are now rarely performed; Liszt's piano transcriptions of Beethoven's symphonies are of little more than curiosity value.

The point I am trying to make after all this, is that the original composer knew what he was doing, his work sounds best when performed the way he wrote it, and a new adaptation, arrangement, or plagiarism of his work work will do little to enhance it. Encouragement should be given to originality rather than timid imitation. Progress in music will be made by surpassing the genius of Tchaikovsky and Wagner, not by slavishly repeating their forms and ideas.
—Peter Millward
Basil, Switzerland

Substantially, I agree with you. Your comments only repeat what I mentioned in my notes. My objection to the Santan reorchestration, for example, failed because Santana's strong point is its intricate rhythms, not its melody lines, and melody is what someone attempted to transfer to the symphony. A mistake, that's all it was.

However, I do disagree with your idea that composers shouldn't use the ideas of others. There is no particular reason why one should treat musical techniques any differently than any other kind of data. Just because a scientist developed a certain lab technique to accomplish a particular goal, doesn't mean you can't use that technique in a totally different context (unless, of course, the technique is property). Just because GE makes its light bulbs with the expectation that they will be used as light bulbs doesn't prevent me from breaking one open for raw materials. The question, I suppose, is whether you use the raw materials, the techniques, well or poorly. Your listeners will let you know that quickly enough.—ed.

Dear Sir:
I would like to speak of the November 1969 articles by Tibor Machan, Lanny Friedlander and Jarret Wollstein. First, Mr. Machan.

Mr. Machan's paper does not begin with a clear-cut definition of "justice," nor does he proceed to relate that concept to the moral base from which he implicitly argues. Rather, he immediately begins using the term in his second sentence. Meanwhile, Mr. Machan is a Ph.D. candidate in Philosophy.

With even careful reading, much of his writing—certainly the first and last sections of his paper—is unclear; under the force of questioning, many of his statements on page 9 become less than meaningful. Implicit in his writing—at least there is a good suggestion of it—is a deterministic psychology, or the belief that man's free will resides in his choice of actions. (I would be glad to elucidate with regard to this paragraph.)

A last general comment about his paper concerns the second to last paragraph. In a personal way, I am astounded at what it says, for it is a statement following pages which denounce the injustice of the welfare state. Considering this, the statement at the end of his paper is truly incredible.

Following are two reasons why Mr. Machan's paper should be read with extreme care. They point out two of several contradictions.

"If anything is properly designated unjust [to whom? and why?] it is a situation where someone is either enjoying or suffering consequences not caused by him. (This. . .may be applied to the enjoyment of gifts and inheritance; [note the word "gifts" as well!]; however, to prevent the resulting injustice would involve a more serious form of injustice, in most cases ["in most cases"?—what does that mean?] —the usurpation of the rights of individuals to distribute what is theirs to willing takers.)(p.9)

Objectively, one right cannot contradict another right; therefore, the alleviation

to increase profits (of police agencies and related firms) and, thus, incentive." (p. 7; my italics)

But, as you wrote, it is the committing of crimes that "would be a source of potential profit for honest men." The profit making is dependent first on the committing of crimes.

In essence, amongst other things, you are subjecting the validity of a human right to the test of whether the price—or percentage asked by the police (for the police would surely ask for a percentage of the profits)— is low enough to warrant taking into account the violation of that human right.

I rather think the implicit principles that you are setting up in your thesis need to be identified somewhat more explicitly; then, you can proceed—or retract.

(Note: the pronoun "you" was used in the above on the assumption that Mr. Friedlander is reading the above, personally.)

And last, Mr. Wollstein:
Mr. Wollstein is editor (or a staff member) of the Rational Individualist, and President of the Society of Individual Liberty. In the middle of his thesis, Mr. Wollstein writes:

"Let me make absolutely clear what I have so far conclusively proven. I have so far demonstrated that if one believes [sic] in the concept of man's right to retaliate (and arrest, incarcerate and judge) at all, then one must accept the fact that private agencies could morally be established for this purpose, and that government cannot morally interfere with their operation so long as they only retaliate force." (p. 17)

Well, let me make absolutely clear that Mr. Wollstein is absolutely and conclusively right. Except for one detail that he forgot to take into account, in his excitement. I will name this one little detail, and if someone is interested in Mr. Wollstein's "conclusively proven" thesis, he will read—or reread—the the thesis, apply this one very small inconsequential detail, and watch the thesis become a bubble unconnected to man and his rights.

The omitted detail: The accused ALSO has the right to self-defense.

Apply this detail, and what it necessitates, and watch the Wollstein thesis collapse.

Some complementary thoughts to the above detail: Restated, it reads: The accused has the right to be judged according to an objective legal code; restated: You and I are innocent until proven guilty according to an objective legal code enacted through a process that guarantees my innocence—and yours, and Mr. Wollstein's—until proof of guilt is established; restated: self-defense means self-defense against the criminal, the government, and the accuser (which could be Mr. Wollstein, along with his private police force, in some back alley—arresting, judging, and incarcerating, by God knows what standards); restated: What one delegates to the government is the absolute requirement that they protect you against the initiation of force; to be accused, followed by the act of incarceration, is an initiation of force if one is innocent.

Here is a consideration: The law and its penalties—as well as the policeman on the beat—act as a deterrent, and in that sense, protect us who are sitting at home. But the moment a law is violated, the power of the legal system is aimed at protecting the accused—for this is the implementation of the accused's right to self-defense: I am innocent until proven guilty, and it is the government which protects me from Mr. Wollstein's and other's private police forces. That is the concept, which, although not fully practiced now and is violated by evil laws, does make today's state of injustice in North America a far better state than that which would obtain as a result of the Wollstein thesis.
—Ray Singer
Toronto, Ontario

Dear Sir:
Currently libertarians including anarchists, free market economists, students of Objectivism, classical liberals, limited statists, and others are actively discussing whether we can and/or should do away with government or not. The purpose of this note is to suggest 1) that the seeming division is not important today and 2) that it really boils down to a misunderstanding of terms rather than a different version of what a free society would be like.

First, if you see attainment of a free society by the reduction of power of the existing governmental institutions, you realize that this is going to take us a while. Libertarians can work together to eliminate all government functions except police, courts and defense. When that is all that the government does, those of us who are anarchists (and who haven't left the struggle to enjoy the abundant personal pleasures of that near-paradise) will argue for the further privatization of this and that function. That will be the time to argue, not now, with so much work for libertarians to do.

Secondly, we seem to be using the words government and anarchy differently. Most libertarians who insist on government tend to define it as any arrangement by which a geographic area is controlled. Thus, a president, a dictator, a war lord, a corporation board of directors, and a private property owning individual are all the governments of the areas they control and have the final say in disputes in those areas.

These limited statists rightfully argue that anarchy or no-government can not exist. And indeed, it can not, because they have expanded their category (government) to include all the items (all systems) and left the other category (no government) empty (except, perhaps for the periods of transition between stable systems, periods usually of fighting and upheaval).

But for those who oppose government, anarchy has a different meaning. Coming from the Greek word Anarchos which means rulerless, anarchy is a system in which free men voluntarily associate with each other and peaceably settle disputes and establish agreements that they live by. The opposite is any system in which some group of men (government) imposes its will by force upon a people in an area.

There is no effort here to establish which are the "correct" definitions of these terms. I simply wish to suggest that we can agree (and I will use different terms) that a free society is one of voluntary association. The agreements that govern it are real "social contracts" (unlike the Constitution which you and I never signed). They would be more like the Articles of Confederation that was an agreement among States that did not confer powers of taxation and regulation on the Confederation Congress.

Looking at such a system from the bottom up we begin with the individual. Since he has conflicts with his neighbors, in order to avoid violence, he will form agreements with them on the rules of the community. One of

these rules will establish how the community will relate to other communities. Communities will also associate with each other to settle disputes and to provide for defense and these associations will, in turn, get together with other associations to handle broader questions.

If you want a mental picture of this, think of a lot of communities at the local level; regional associations that handle problems of pollution, extradition of criminals, suppression of regionally unacceptable practices such as slavery or spitting on the sidewalks; an Articles of Confederation Congress and Supreme Court on the "national" level providing for the "national" defense and protecting civil liberties; and on the "international" level a NATO type organization providing collective defense and treaties settling disputes.

Since anarchy has such bad (and mistaken) connotations and since it has caused so much confusion among libertarians, perhaps we should speak of libertarianism, voluntary association, decentralization of power, individual freedom, free markets, etc. (Also, anarchy has little more appeal among students in general and the New Left in particular than libertarianism, etc.)

(However, I must admit that it sure feels good to call yourself an anarchist when you have just heard about the latest government atrocity.)
—Rod Manis
Stanford, California

Dear Sir:
I appreciate your emphasis upon libertarian principles. Lately I have noted a number of improvements in your format and content. Your analyses of the state and its excesses are usually excellent, although I didn't appreciate the "pop art" cartoons on the New Left—nothing against pop art, but the approach to the Left seemed like overkill.

How about some analysis of some of the good done by SDS, etc.— such as NCUP, Woodlawn, breakfast programs, etc.
—W. L. Brown

Dear Sir:
I find the editor's notes interesting and informative and would like to see more letters from readers published.

I found that I disagree with just about everything that was contained in your November issue. However, I think you showed great courage in printing them. Even in my disagreement, I learned from the articles. Overall, I think you are doing first-rate and hope to see you expand even further in the future. Meanwhile, I will continue to tell my friends about your magazine and do everything in my power to help you increase your subscription list.

Concerning the November issue, I am sending you separately my detailed comments on it. My only real complaint is the delay in the last two issues. However, disagreement notwithstanding, they were worth the wait. Keep up the good work.
—Robert Cassella

I would like to apologize for the delay. I am working hard to put the magazine back on schedule—as well as turn it into the best of its kind. Thanks for your help.—ed.